McElroy

world's champion radio telegrapher

Tom French

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World's Champion Radio Telegrapher

By

TOM FRENCH

W1IMQ

Artifax Books
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2007

McELROY

the biography of Theodore R. McElroy,

world's champion radio telegrapher

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To Carla

whose encouragement and support
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research and writing made this book possible.

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Dozens of others submitted to interviews or contributed clippings, anecdotes and information; at the risk of omitting many who should be mentioned, I am indebted to Margaret (Mrs. T.R.) McElroy, Ethel Lord, Colin Waters G3TSS, Theda McGrath, Betty (Griffin) Herrick, Hazel (Mrs. H. Reg) Adams, Gaspard Lizee VE2ZK, John Elwood WW7P, Harry Lewis W7JWJ, Dave Pennes WA3LKN, Larry Rossiter VE7QF, Bob McGraw W2LYH, William G. Pierpont NØHFF, Walter J. Stiles W7NYO, Don Hawley W4ZU, Bill Burgess W1BDS, Ralph R. Caryl W8LHG, James A. Maxwell W6CF, Lawrence D. Kelsey NP4RH, Bob Ruplenas W1DDO, Charles Nevel W3KSQ, John Rhilinger Jr. KC1MI, Alan Douglas, Bob Arrowsmith W4JNN, Chuck Brydges W4WXZ, W.J. "Buck" Wortman W4CYB, Jon French, Mike Scimeca, and the Veteran Wireless Operators Association (Edward F. Pleuler Jr. W2EIQ, Secretary).

Unless otherwise noted, all family and business photographs are from the McElroy family collection and all telegraph keys are from the author's collection. The trophy photos are from the author's files.

authorization and errata

The question may arise as to whether this is an "authorized" biography of Ted McElroy. In the sense that his family cooperated with my work, it is. But insofar as the term suggests that family approval was obtained at the cost of neglecting certain areas of Ted's life, it is not. No family member has seen any part of this work prior to its publication. That is not to say that this book encompasses every event in McElroy's life. The number of pages is necessarily limited, and the process of selecting events for inclusion meant that others had to be left out. But those decisions were made by me.

The corollary to not obtaining a review of what is on these pages by the family of Ted McElroy or any other of my sources is that they did not have the opportunity to correct my errors or voice disagreement with what I have written. The reader must therefore hold me solely responsible for any errors or misinterpretations of facts.

Tom French

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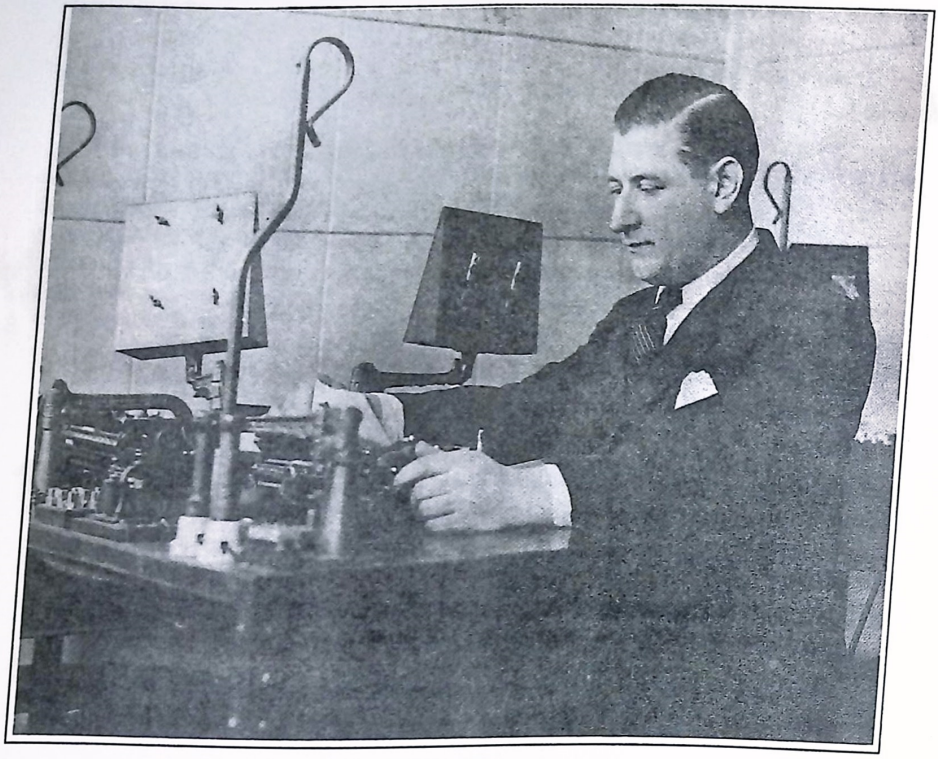


Theodore R. McElroy, telegrapher. This undated photo was taken during a visit to a Western Union office about 1935.

McElroy Family Tree

Charles A. McElroy

Catherine McElroy

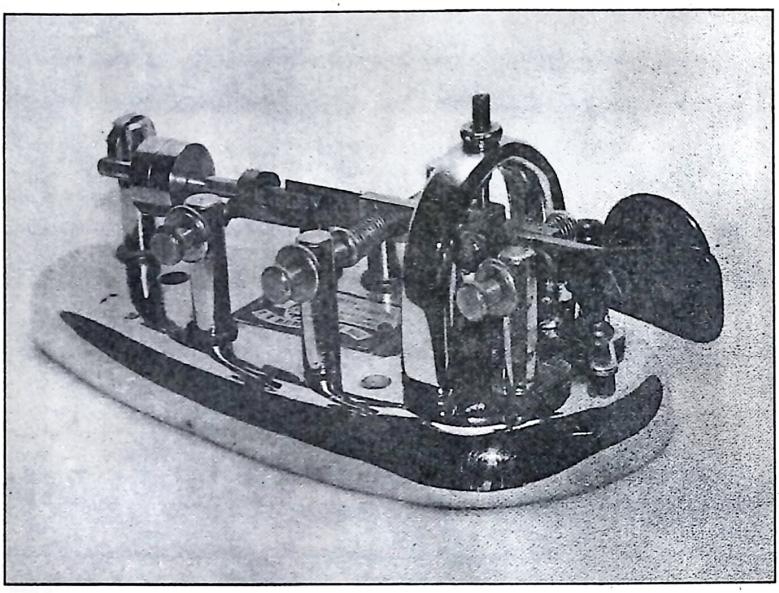
Starting with Ted McElroy's mother and father, Charles and Catherine, this "family tree" includes their children, grandchildren and (in the case of Ted's line), great-grandchildren.

Charles A. McElroy -- Catherine O'Grady*

Charles A. Jr.	John W.	Theodore R.	Howard J.	Eleanor (Harris)	Paul J.
Charles A. III Thomas D.** John W.**	(no)	John C.	Howard M. Theodore R. Leora	Charles John Robert William	(no)
		John C. Jr. Daniel L. Mark D.			

* Ted's birth certificate gives his mother's name as Grady

** twins



One of Ted McElroy's last bugs, the 1941 model S-600 "Super Stream-Speed." It's not the scarcest Mac Key, but to collectors it's the most desireable.

INTRODUCTION

Because Ted McElroy made "Mac-Keys," many people seem to think his surname is accented on the first syllable: *mack*-'l-roy. He undoubtedly contributed to this confusion by using the nickname "Mac" in business. But it's pronounced with the accent in the middle: m'c-*el*-roy. The name has its roots in Ireland:

> Ballymacgilroy, the seat of the MacGilroys... is situated about two miles east of Lisnaskear Village. The Boundary Surveyor has given no such name, but I find that what he calls Mulloghkeel is called Ballymacelroy on the Grand Jury map of this country.... The MacGiolla Ruaidhs are a very numerous clan in the parish of Aghalurcher. Some anglicise the name McElroy, others Gilroy but MacGilroy would be better.... *John O'Donovan, Nov. 19, 1834.*

We'll stick with McElroy. More troublesome than the pronunciation of the name are the errors, rumors and half-truths which have been told and retold about Ted McElroy. The impetus for my *Vibroplex Collector's Guide* was a lack of information on the subject. The problem with information on McElroy was not its absence, but that so much of it was incorrect.

The "facts" which have appeared in the articles about him are almost always a repetition of those that originated the in articles by McElroy himself—especially the *Radio* series. Unfortunately, Ted had a careless disregard for precision when it came to the details of his life. Just a month after he set his receiving record at Asheville, he began quoting the speed wrong. And recent "facts" can be just as misleading: We are told, for example, that McElroy is "survived by a nephew...on Long Island." Indeed—but why was there no mention of Ted's widow and son in Massachusetts? Clearly, some original research was warranted.

Because of Ted McElroy's flawed memory, I tried to verify each of his statements with a second source, or by correlation with related events. That wasn't possible in every instance, but if this book eliminates the more flagrant errors and gives us a clearer understanding of McElroy's life, it will have accomplished its purpose.

McElroy, a proficient typist, once said "I type as fast as a guy talks." The result was that he typed *like* he talked. For those who never met Ted McElroy—and I'm in that group—I have been assured by those who knew him that the way he wrote his ads, articles and letters was "exactly the way he talked." For this reason I have quoted liberally from his writing, so we can all "hear" the voice of Ted McElroy.

Many of Ted's admirers came from the ranks of amateur radio operators who judged their ability in receiving code against the standards he set. And since "hams" identify themselves and each other by their radio call letters, you will see in this book many names followed by such call signs. To a radio amateur, one's call is as important as one's name. Perhaps more so.

Finally, I commend the "notes and references" section to you. Readers who habitually skip "the stuff in the back of the book" may overlook some pleasant nuggets of information.

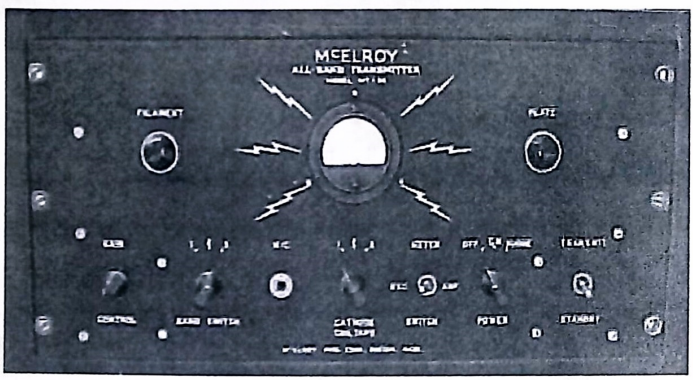
And now, permit me to open the circuit and tap out the story of the man who will always be known as the World's Champion Radio Telegrapher...

INTRODUCTION to the second printing

For this second printing I have substituted better photographs of some of the keys, but have made no changes to the text. So I will note here a few corrections, more information on the keys, and a new McElroy product discovery.

Page 47: DeSoto's article on W1BDS was in the November 1938 (not 1939) issue of QST. Page 114: The S-600 Streamspeed is found not only with three mounting holes in the base, but also with two holes, and no holes. It was also made, though not advertised, with a rare black wrinkle-finished base. Page 117: The "hummer" mounted on two (not three) holes at the back of the straight key. Page 118: The second model Streamkey was also made with decals, like those found on the No. 600, on the sides, and no nameplate. Page 121: The late model J-38 has the name McElroy cast into the black frame. Page 122: John McElroy did not actually start shipping his "Professional Model Hand Keys" until 1969. Page 143: Delete note 16 (the referenced article was not used in the text).

In 1997 I found that McElroy made an amateur transmitter, the never-advertised "All Band Transmitter Model MT-35." Today, four are known. It had a 19" relay rack panel, 9" high, in a 15" deep cabinet. The RF section was a 6L6 crystal oscillator and an 807 amplifier. Output was 30 - 35 watts CW or AM (Heising modulation). Inside, you could plug in three each crystals, oscillator coils, and amplifier coils and, using the "band switch," select one of the three frequencies for operation.



One MT-35 owner, Art Lebermann, W6REQ, learned through correspondence with Leo Myerson (founder of World Radio Labs) that in 1945 McElroy decided to produce an amateur transmitter. Unfortunately, McElroy ran out of capital to manufacture the rig. He called Myerson (who was then selling parts and ham gear from other companies) and offered to sell him the design and parts for 1500 units. Leo agreed to the deal, as he had just decided to set up a manufacturing facility of his own. Leo "cleaned up" the design, put the "WRL" logo on the front panel, and produced the first transmitter from WRL: the "Globe Trotter" (introduced in June, 1946).

Opposite page: Ted McElroy and Margaret Frances Coleman, about 1925.

PART I

The Life and Times of

T.R. McELROY

CHAPTER 1

Call Me Teddy

1901 - 1920

At the turn of the century, most people didn't tend to move far from the place they were born. Roads were poor, automobiles were still a curiosity, and if you had work there was no reason to wander. Charles Aloysius McElroy was a second generation American whose grandfather had arrived in Boston from County Fermanagh, Ireland, in 1836. In 1901, Charles lived in Somerville, Massachusetts, a mere three miles from his Boston birthplace.

A few people moved great distances, often leaving their homeland forever to emigrate to a new country. Catherine O'Grady had been born in Ireland. Now her home was 60 Buck Street, Somerville, where she lived with her husband, Charles McElroy. Both had jobs as clerks, supporting their two sons, Charles Jr. and Jack. And in 1901, the McElroys were expecting another child.

Vice President Theodore Roosevelt became President on September 14 upon the death of William McKinley. Like many people, the McElroys were admirers of their new "cowboy president," hero of San Juan Hill during the Spanish-American War. So the next day, when Charles and Catherine became the parents of a third son, the choice of a name was obvious. They named him Theodore Roosevelt McElroy.

His mother persisted in calling him "Theodore," but the boy did not care for it. "Call me Teddy," he'd say, and his friends did. As an adult, he would do business under the name of T.R. McElroy; business correspondence was signed "Ted" or "Mac." To those who knew him, he was "Ted," but to those who knew him well, he was always "Teddy."

In the McElroy family, Teddy and his brothers would be joined by three more siblings: Howard, Eleanor and Paul. Among his neighborhood friends was a boy two years older than Teddy; he and Bill Halligan would remain lifelong friends.

The McElroys were poor. This circumstance defined childhood for Teddy and led him to an early education on the streets. "Unless you was poor, you don't know what the hell makes the world go round," he later said. At the market, Catherine would ask for free bones for their dog. The McElroys, of course, had no dog; the bones were for soup. Contributing to the support of the family, Teddy began by stealing milk from doorsteps. "Theodore, from rich people?" his mother would ask. "Yes, mama," Teddy would reply. And his mother would say, "That's all right."

In those days, in the city, there were deep divisions between the rich and the poor, and between the Catholics and the Protestants. Teddy's mother was no different than many others who found it hard to make ends meet. She had definite opinions, which were more than merely theories of social behavior:

> With my mother they wasn't no longer no theories. When my mother said it, it was just as goddamn effective as a papal bull.... If [she said] you can steal from a rich protestant and it ain't a sin,

> [then] you can steal from a rich protestant and it ain't no sin, you bet your ass.

When he was six years old, Teddy was "working as a legitimate workman in the A&P or something like that." He'd give his earnings to his mother, together with everything else he could pilfer from the store. "Theodore," his mother would ask, "you bring everything home to mama?" Again, the correct response: "Yes, mother." In that case, his mother would say, it wasn't a sin.

By the time McElroy was seven or eight, he was working for a wholesaler and was a "genius" at helping provide for his family. "You wouldn't believe it, the stuff that I could steal," he reminisced years later. "To this day I can't eat blueberries, cause you know, you worked in a store, you could steal anything you want for free, and I got so goddamn sick of them, to this day I can't eat them."

Although his mother "mostly disapproved" of Teddy stealing money, it was all right to bring home bread or milk for the table. Teddy felt it was up to himself and his mother to support the family. His alcoholic father, in Teddy's opinion, contributed little. But he didn't blame his father; he felt sorry for him "because my mother was a pretty tough broad."

He continued to work part-time while going to school. By the age of twelve, he was rising early to sell newspapers before classes. There was nothing unusual in Teddy's industriousness; many youngsters did the same, helping their families to get by in hard times.

Teddy's schooling began in Somerville's Forster Grammar School. The Forster, a thirteen-classroom structure built in 1866, was the oldest school building in the city. It presented a "rather foreboding exterior, complete with mansard roof," to the children that attended its classes. Teddy's years at Forster were unremarkable, but for one detail. He took a typing course in the seventh grade. It was a skill at which he quickly became proficient, and which would have a major influence in determining the direction of his life.

He graduated from Forster on January 28, 1916, at age fourteen. Years later, when speaking of his formal education, McElroy always seemed proud of the fact that he had, in fact, graduated from Forster. In a time when many children, for financial or family reasons, were unable to attain this goal, completing grammar school was an important accomplishment.

He seemed just as proud to state that he never went beyond grammar school. But this was when he was a successful businessman, and it suited his purposes to have his admirers believe that he had come so far and accomplished so much with so little prescribed instruction. It wasn't true, but it made a good story. In one version, he embellished it with an involuntary separation: "Back in '14 following my "graduation" from school (they threw me out for the good of the school)...." In another version, it was simply a statement of personal history:

> I don't tell no lies. When I told you grammar school, that's the truth. That's all I went. I never went a goddamn day to high school.... I'm not bragging about, I'm saying exact because it's important. I didn't go a day to high school. I went, boom, right out of school, that's all—fourteen years old.

Conviction tells a better story than the confusion and doubt McElroy actually had on the subject. "I have a very hazy recollection of having graduated from the Forster Grammar School approximately 1914," McElroy said in 1951. "I think I attended Somerville High School for a few weeks."

Indeed he did. He enrolled in Somerville High School, entering the ninth grade, on February 1, 1916. He registered for the Commercial Course, perhaps intending to parlay his typing skill into preparation for a life in the world of business. But given the need to earn a living and help his mother put meals on the table, McElroy's time at Somerville High may have been marked more by absences than attendances.

The McElroys had moved to 49 Montrose Street, next to the railroad track. It was a predominantly Irish neighborhood known as Jerome Court. Fourteen years old now, Teddy had found a job working part-time, after school, as a Western Union messenger. The Western Union opened offices wherever it could. In those days of no zoning codes, that meant nothing more than finding a convenient place at an acceptable rent. Teddy delivered telegrams out of the Gilman Square office, which was located in a ground-floor room of an apartment building. The company provided him with a bicycle.

He couldn't steal bread or milk as a Western Union messenger boy, but he found other ways to supplement his income. "Those were the happy days when you'd deliver a message to a non-English speaking addressee and painstakingly explain that there was a small charge of one dime!" Of course there wasn't, since most telegrams were paid for by the sender. But the recipients didn't know this, and although some of them might have been Catholic, "they was farmers, so it don't count."

Given the choice, and with the continuing need to help his mother feed his family, Teddy probably would have gone to work full time with the telegraph company upon graduating from Forster. But the law required him to stay in school until he was fifteen, and the Western Union wouldn't hire him as an operator until he reached that magic age on September 15, 1916.

Teddy's name was officially removed from the rolls of Somerville High School on November 24. By that time he had probably already left, and was an operator at the Western Union. His progression from messenger to operator was not so much planned as preordained. "What are you gonna do? When you're a messenger boy, naturally you're gonna be a telegraph operator...and on my fifteen birthday, I became a telegraph operator. I was already one of the best in the world. About six months later I was the best in the world."

Two skills were required to be an operator: the ability to type and the ability to send and receive Morse code. Teddy had learned typing in school; the Morse he learned while working as a messenger. He described both the incentive and the process this way:

> A few months on the streets [as a messenger] taught me the necessity for "higher education", and the greatest heights to which any messenger might ever aspire—was the third floor, where the Morse operators sat in the midst of a clatter greater than any steel mill produces....
>
> I started doing little odd jobs. Running errands to deliver personal notes for the operators.... [I]n return for my efforts, some of the Morse men would give me a little practice on their "shorts"—their 15-minute respites from the grind. And out of a few weeks of this smoking room tuition I emerged what I fondly figured to be a good operator. Well, sir, the first few minutes on a wire when they finally decided to try me out, convinced me that maybe

there was another operator or two who might be better. You've all been through it probably. That, anyhow, was my start as an operator.

As a novice telegraph operator, Teddy had to pay his dues and gain experience. The Western Union assigned him first to small offices in the boondocks, and then to progressively busier offices with more work and responsibility. As he put it,

> I went through the various stages of working in the woods, moving up to the ways, and finally to the trunks were a man would work bonus, and have a chance to make a real week's pay, with the aid of a peculiar style of mathematics which skipped ten numbers occasionally....

His first major assignment was a "split trick" as the manager of the Medford and Chelsea (Mass.) branch offices; he'd open at Medford at 8 A.M. and close shop at Chelsea at 9 P.M., travelling between them by bicycle. On Sundays and holidays he worked at the Traffic Department in Boston. The overtime work meant more money, but it was at straight pay; there was no time-and-a-half in those days. While still in his teens, Teddy found himself the chief operator for "Uncle Wes" (as the Western Union Telegraph Company was called by its workers) at Keene, New Hampshire.

It was while working bonus on the trunks that McElroy discovered why there were so many good telegraph operators. "Good Morse operators in the old days came into existence by the law of economics. They just simply had to be good at about 1¢ or 2¢ per message to make money and good Morse operators were the elite of working people. They did make money - remarkable money for the times in which they lived."

Looking for greener pastures, Teddy left the Western Union to work for Morris & Co. in Boston, one of the "big five" meat packing houses. Like many large companies, the packing houses had their own private Morse lines. At Morris, he worked on a "very fast (everyone useta say their wire was fast)" line to New York and Chicago. Eventually he would work for all five of the packing houses, but after a while with Morris, he returned to the Boston Traffic Department of the Western Union.

During the latter part of the First World War Teddy was transferred to Camp Devens, in Ayer, Mass., as a civilian operator. When the Great War ended late in 1918, there was little need for telegraph operators at Camp Devens, and no jobs back in Boston. He spent "a few weeks loafing in Boston" and finally found work on a coal ship. "I remember sailing up and down the coast as an ordinary seaman on a collier in 1919," he recalled later. "You not only slept with cockroaches and bedbugs, but you actually smelled like a bedbug, and we would wash up in a bucket of water."

McElroy took his first job as a "wireless operator" during this period. He worked under Captain Diehl on the SS City of Columbus, where his equipment consisted of a crystal detector receiver and a rotary spark gap transmitter. He never forgot one odd aspect of the job:

> We were compelled to press a button every 30 minutes, which would sound a buzzer up on the bridge so that the mate on watch on behalf of the Captain - - actually on behalf of the miserable ship owners - - made sure that we did not become interested in any

other activity excepting to be glued to the phones on watch. It did not matter that that other activity might have been taking care of batteries or some other job for which we were not paid, and it might have been attempting to improve ourselves by studying radio.

He would joke about the "Public Health Service guys that useta look us over after a long foreign trip. We were suspected of everything from athletes foot to dandruff and a lot of peculiar things in between." And it was during this time that he worked as a wireless operator on various fishing trawlers on the Grand Banks.

Teddy (on left) outside Keene, NH, office

Then Teddy heard a rumor that RCA was hiring Continental operators at their transoceanic station WSO at Chatham, on Cape Cod. He borrowed a few dollars from some of his operator friends, and headed out.

> ...I hopped a train for the Cape. Kripes! One way fare and I hardly knew Continental code.
>
> Fortunately for me, and rather unusual, too, there was an American assistant superintendent who hired the operators. A real Gentleman for whom it was a pleasure to work, Fred Heiser. It developed that Fred had been a real high grade Morse operator and during my test which brought out a palpable lack of knowledge of radio code, he threw some Morse at me. It was a cinch. A guy would have to be deaf, dumb and blind not to be able to copy the kind of Morse he sent. So on the strength of that he hired me. So began the career of Mac as a radio operator. They were sorry! They could only pay me $140 a month! Whoops! A first class

Morse man was drawing only about $125 in Boston at the time.

> We used to work POZ, Nauen, Germany, and LCM, Stavanger, Norway.... We had two and sometimes three landlines to New York, and it was on these circuits that I worked most of the time. Continental code. It was murder for about two weeks but then easy. They had some wonderful operators down in New york, too. All Morse men who had learned Continental as I did in a few days. There was Jack Dorien, and Jim Shea, and a fellow named Henderson, and a flock of other wonderful operators. And I remember especially Joe Chaplin who was probably as fine an operator as there ever was in the business. And Benny Suter and others....
>
> We had some great operators at WSO, too. I remember Joe Lynch who used to send with a straight key almost with Wheatstone perfection. Funny about Joe, too. He was about the only operator I'd ever met who was a real good operator and yet hadn't been a Morse man. I guess it ought to prove that an operator can be a first class man without first being a Morse operator.

One of the "wonderful operators" from New York, Joe Chaplin, would become a formidable rival. Another, Frank Borsody, worked with McElroy on the Berlin circuit; Borsody would prove to be a close and helpful friend to McElroy.

It was at this time that McElroy earned his commercial radio operator's licence, a requirement of his position with RCA. This professional introduction to Continental code and its accoutrements (he wore headphones as he copied on a typewriter) was fortunate, as it would come in handy in a few years. The new code came easily to him; perhaps because of the absence of spaced characters, it "seemed much more sensible than American Morse". He found that it was "more rhythmic, there is much more opportunity for perfection in Continental than in American Morse."

The communication provided by RCA's Alexanderson alternator transmitter left a lasting impression on him. "The damn thing provided a circuit almost like a 100% copper wire circuit from Chatham on Cape Cod to Stavenger, Norway and Nauen, Germany." But the good days at Chatham didn't last forever. About 1920, RCA moved its trans-oceanic office to New York, along with McElroy and many other operators. "That," he said, "was the beginning of the end."

McElroy's pride in his long American ancestry and his Irish braggadocio made him few friends in the "big city." His attitude toward the residents of New York is evident in his statement that "I lived in Boston most of my life among American people." Probably more aggravating to his employers were his activities in trying to form a union, so that "it was only a matter of time before I was out 'for the good of the service'—they couldn't take it!" He was, in a word, fired.

McElroy moved around the country, taking jobs where he could find them. He worked as a broker operator, a press operator, and with a packing house. He worked for a time on the *Nashua Telegraph*. The work of a telegraph operator wasn't strenuous, although it could be draining. McElroy described one of his press jobs this way:

> On the dot 8 A.M., you'd sit down on the first or second

New York State ckt and for two hours pour copy into every big city newspaper from Chambers Street, New York, to and including Buffalo—at a minimum average of 35 wpm. Again at exactly 10 o'clock you'd say "take ten" and stop for coffee or cigarettes for ten minutes. etc., to noon and finally you wound up exhausted at 4 P.M.—but $135.00 for 40 hours was good in 1920.

The practice of the ten-minute break was a necessity due to the demands of the work:

> When you work as a telegraph operator, you sit at your telegraph wire working steadily and you cannot stop to smoke a cigarette or to go to the rest room or to drink a glass of water or anything else. You do nothing but work steadily.
>
> Because of this fact, it became the custom in radio offices and telegraph offices to stop the telegraph wires for ten minutes during each four hour shift. That would be the only time that a telegraph operator could drink a cup of coffee or coca-cola or something like that and also the only time that a telegraph operator could go to the rest room.

Handling the work was no problem for McElroy, but he eventually tired of being a boomer—following the work where it took him. He decided to go back to familiar places.

> So I returned to the bosom of good old Uncle Wess at Boston where my original boss and the kindly father to all Boston operators, took me again under his supervision. I'll never forget the debt I owe him: J.B. Rex, the chief operator of the Western Union in Boston.

Landline telegraph operators used a "sine" to identify themselves on the wire. This is often just couple of letters, or a similarly brief nickname, assigned by the wire chief. When Ted McElroy was re-hired by the Western Union, "VA" was back on the wire.

CHAPTER 2

A Few Days Vacation With Pay

1921 - 1932

After McElroy had been back on the line for a year or so, the 1922 Boston Radio Exposition was announced. One feature was a code speed contest; Ted "thought it might be fun to enter it, and besides it would give me an excuse to geta night off." McElroy apparently worked Saturday nights, since he always credited his boss, J.B. Rex, chief operator at Boston, for allowing him to attend the contest at Mechanic's Hall on the evening of May 6:

> So "the old man", as the operators affectionately referred to Mr. Rex, said okay for Mac to take the night off. So after working Morse all day and not having heard Continental for about a year, I entered the tournament. Very fortunately for me there were no good operators there, so it was a cinch.

Indeed it was. The contest started with thirty contestants, was quickly narrowed to a dozen, and finally to McElroy and his "cousin," Walter Vetromile of Everett, Mass. This was no surprise to the spectators; both men were well known to New England radio fans.

The tenuous family relationship didn't dampen the competition. Like McElroy, Vetromile was a professional telegrapher; he worked a wire with the *Boston Globe*. But that was in Morse. In Continental, he ran out of steam at 46 words per minute. McElroy had the contest and the trophy won, and in what was standard procedure for some early contests, he was allowed to continue.

Two months earlier in New York, Jose Seron, a Chilean working for the New York Radio Corporation, had set a new world's record of 49.5 words per minute. At Mechanic's Hall, McElroy kept on, alone, until he could go no faster. It was good enough. He had set a new record of 51.5 words per minute.

McElroy spent the next day at the Radio Exposition showing off the silver loving cup he had won. It was engraved:

Boston Radio
Exposition
Trophy
for
Speed and Accuracy
in
Radio Reception
May 6, 1922
T.R. McElroy — W.U. Tel. Co.
51½ W.P.M.

Boston Radio Exposition, May 6 1922

New York Radio Show, May 24 1922

Attending that first contest was a chance for McElroy to have some fun. He couldn't see how "Uncle Wess" would get any mileage out of his entering such contests; he thought that J.B. Rex "just figured it a chance to give a youngster a few days vacation with pay."

And the point of the contests was contrary to McElroy's work as a telegrapher, where one strove for accuracy rather than speed. He contended that "real speed should be measured on the volume of traffic that could be pushed through and...this depended on accuracy and absolute adherence to procedures." The Phillips code was his bible; the accurate use of those abbreviations translated into speed. On the other hand, to ignore procedure led to mistakes, misrouting and misunderstandings, which resulted in delay. So McElroy, like many professional telegraphers, held the quest for speed in contempt. The irony was that now he held the world speed record for radiocode reception.

Now that McElroy was the champion, he had a title to defend. And it was undoubtedly a matter of pride—and free publicity—to the Western Union that one of their employees was the world's fastest code receiver. "There was one tournament after another," wrote McElroy, and he wasn't kidding. The next official contest was to be held in New York a mere eighteen days after his first. J.B. Rex arranged with E.R. Shute, the general superintendent of traffic, to give McElroy "a few days off to prepare for the event and a few days afterward to celebrate," as McElroy put it.

The New York Radio Show ran from May 22 to May 27; the championship code meet was held on Wednesday the 24th. It was, once again, no contest. McElroy would later write that "it was the greatest thrill of my whole life to sit down and thoroughly and unmistakably beat the other entrants." This time he set a new world record speed of 56.5 words per minute, making only one error on the final three minute run.

And once again, McElroy received a silver loving cup for his achievement. The engraving on the tall cup read:

Presented to
T.R. McElroy — W.U. Tel. Co.
Champion Radio Code
Operator of the World
by the
New York Radio Show
71st Regiment Armory
May 22 - 27 1922
56½ W.P.M.

In addition to the trophy, he also received a Waltham pocket watch; the inside back cover of the watch had the same engraving as the silver cup.

Then in August, the "Pageant of Progress Radio Congress" was held in Chicago. A "Radio Marathon speed contest for the Carlson Diamond medal" would open the show at Congress Hall on the Municipal Pier. Twenty-year old Ted McElroy blew into the windy city as a hero from Boston; once again he was the Western Union's representative in the code receiving contest. An article in the *Chicago Evening American* enthusiastically introduced him as "the world's fastest radio receiving operator in the world." Perhaps embarrassed at such a heady title

for one so young, McElroy let the reporter believe he was all of twenty-three years old.

The code speed at the contest again pushed toward the word-per-second mark, faster than most radio operators of the time could copy by ear, let alone on a typewriter. At the limit of one's receiving ability, McElroy later wrote, *dits* and *dahs* sound alike:

> In this connection, I recall an amusing incident at the Chicago Tournament where I received, at 56½ wpm, material from the Congressional Record, transmitted by a Wheatstone automatic. Charles O. Stimpson, now publisher of the *Radio Amateur Call Book*, was chief operator, and one of his duties was to listen in and keep check on the transmission.
>
> Believe me, that was a rather tense five minutes for all of us. After the excitement was over and my copy was in the hands of the judges, Charlie emerged from his listening booth and approached me, a puzzled expression on his face.
>
> "Listen, kid," he whispered in my ear, "did you get it?"
>
> "Sure," I replied, surprised at his question. "Why do you ask?"
>
> "Well, all I could hear," he explained, "was just one endless string of dits without even so much as a space anywhere."

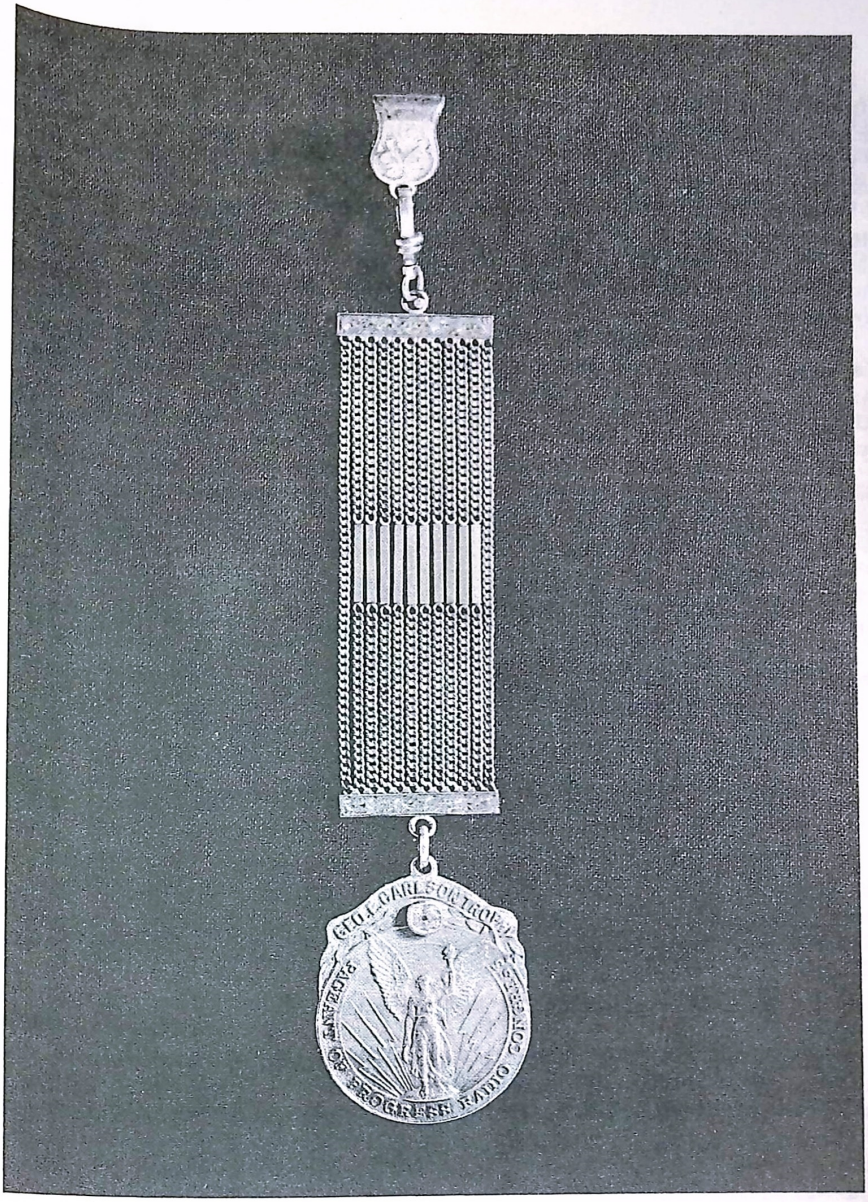
McElroy won the Chicago event and with it, the George E. Carlson Trophy. The beautiful medal, with a diamond set into it, "has since proven its worth many times," McElroy would later write, "in its ever-ready availability as a pawnable asset." The engraving on the back of the medal reads:

T.R. McElroy
56 W.P.M.
Chicago
8-2-22
World's Record.

McElroy would later confuse his New York and Chicago speeds, thus contributing to the confusion of other reporters of the event. But on two points there could be no confusion or disagreement: As the summer of 1922 drew to a close, Ted McElroy was the world champion in radiocode reception. And his speed of 56.5 words per minute was a new world record.

After proving his continuing ability in Continental code at the Chicago show, McElroy made his way to one of the display areas where another contest was being prepared. He took his place along with many other contestants. Most of them were undoubtedly professional landline operators, for the code that would be used was the one they worked with day in and day out: American Morse.

Even though he had found Continental to be "more sensible" than Morse, McElroy had cut his eyeteeth on the landline code. Twenty minutes after retaining the world championship in Continental by posting 56 words per minute, McElroy copied Morse at 70 words per minute for five minutes. But where 56 words per minute in Continental had beaten all comers, in the code he worked with every day 70 words per minute only gave him second place.

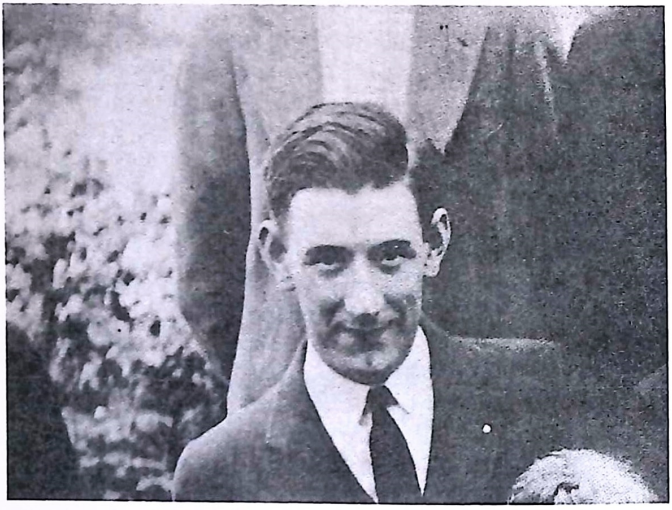


George E. Carlson Trophy, Chicago, August 2 1922

McElroy had won three in a row, but he couldn't win them all. Late in 1922 he entered a contest at the New England Amateur Convention, held in Boston. It was an interesting contest. First, there were only three participants: McElroy and Walter Vetromile, both of Boston, and Joseph C. Smyth, of Brooklyn.

Second, there were three separate contests. "Jamming," in which two messages were sent simultaneously, with the contestants required to ignore one and copy the other; cipher code, which consisted of ten-letter "code words secretly prepared, and transmitted by a Wheatstone transmitter"; and straight press. The winner of the silver cup would be the one performing the best overall in the three contests.

The most hotly contested test was straight press. Both Smyth and McElroy made perfect copy at 45 and 50 words per minute. At 55 words per minute, McElroy made six errors; Smyth made five. Smyth, in fact, won all three tests: Jamming at 35 words per minute without an error, and cipher code at a world-record cipher-code receiving speed of 44 words per minute with perfect copy.



Theodore R. McElroy, about 1925

Smyth, holder of amateur call 2CKB, was duly declared the world's champion. A later report of the contest characterized McElroy as the "former world's champion." But after the results were reported in radio amateur circles, the matter was quickly forgotten. As far as the world was concerned, McElroy was still its champion. Perhaps it was because it was essentially an amateur contest. Or perhaps Joseph Smyth just wasn't flamboyant enough to let the world know he was its new champion.

McElroy was indeed flamboyant. When attending the radio shows to participate in code contests, he had no intention of simply showing up, copying code, and going home again. The

events were an opportunity to show off, have fun, and, after the contest, go out on the town. (Or as many, including McElroy, would later say: Go out on the town, have fun, and *then* attend the contest.) McElroy's friends and sponsors would often get caught up in the frivolities. Years later, General Superintendent Shute wrote to Ted, with telling emphasis, that it was "pleasant to recall *some* of our earlier experiences and escapades. I frequently think and speak of the fun we had when you were a speed demon, and am still amazed at your ability to copy behind."

By this time, McElroy's employer was beginning to take serious notice of the telegraphic wonder they had working for them—and now it was more than just Rex and Shute. After his success at the Pageant of Progress Radio Congress, McElroy received a letter from the president of the Western Union, Newcomb Carlton:

> I have read with much interest and pleasure of your success in the recent radio speed contest in Chicago, and wish to congratulate you on your third achievement in this respect. It is very pleasing to know that this record is held by one of our own employees, and I have no fear that you can not retain the championship.

The letter conveyed Carlton's "kindest regards and best wishes." McElroy would consider the letter "one of my prize possessions."

The Western Union's appreciation for their local hero was nice, but he still had to earn a living. In pursuit of better opportunities and higher wages, he left "Uncle Wess" in November 1922, and took a job at the Nashua, New Hampshire, bureau of the Associated Press. He transferred to New York the following April; two months later he was back in Boston.

Working for AP meant being stationed at one of the newspapers and copying the news off the AP wire. Even here, he was impressive. "I recall when you worked the A.P. at the Herald," a friend wrote to him many years later.

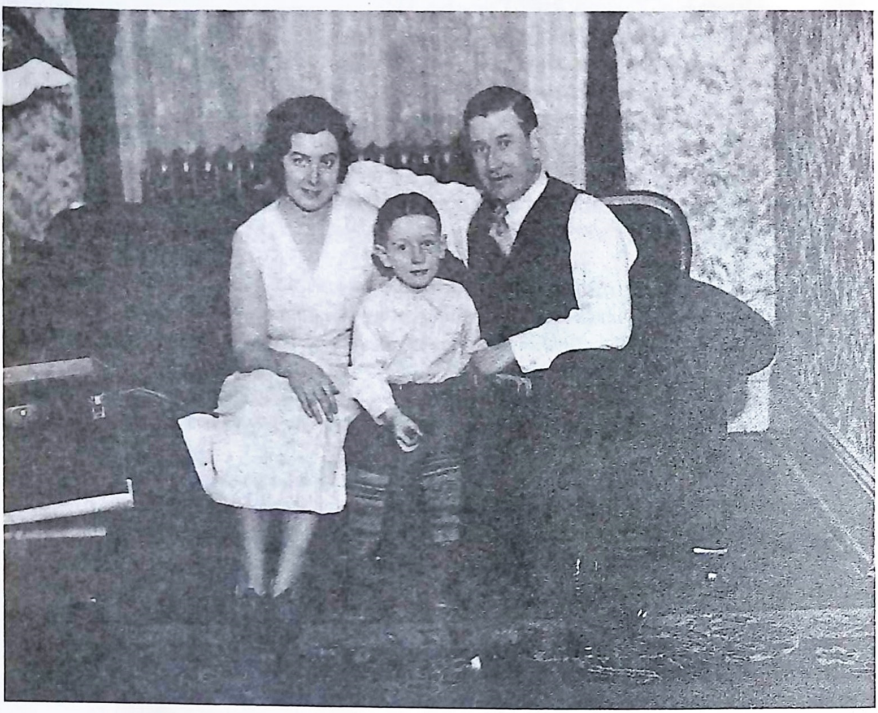
> When I would take a day off the wife...and I would go in town and have us a ball, starting with Chinatown. Would always drop in on you at the Herald. My wife was always amazed the way you copied with out a break and sometimes you would be copying the Market and talking to us at the same time.

On the last Wednesday evening of November in 1923, McElroy participated in an event marking the early history of radio. (The newspapers, however, termed it a "broadcasting stunt.") He went to the station of American Radio and Research Corporation (AMRAD) in Medford Hillside, Mass., to take part in an attempt to broadcast a radio program from station WGI to England. It would be "the first local attempt at trans-Atlantic broadcasting." The next day, a local newspaper reported:

> The try was made in connection with a series of tests being made this week by stations on both sides of the Atlantic. An English station started the series Sunday night and was heard by many stations on this side.
>
> Monday night was Schenectady's turn to broadcast, and Tuesday night was again reserved for English stations. Last night was "Amrad" night in the transcontinental attempts.
>
> The chief feature of the intercontinental program was a talk

on "The Advantages of Learning the Radio Code to a Broadcast Listener," given by Theodore R. McElroy of West Somerville, who holds the world's record for radio reception.

The results of the trans-Atlantic were reported in *Wireless World*. Dozens of British listeners heard WGY, the Schenectady station, and WHAZ at Troy. The AMRAD station was also heard in England—by *one* listener. Presumably a few more American radio fans were able to hear Ted McElroy give his talk that evening.



Margaret, Jackie and Ted, about 1930

During this period, McElroy lived with his folks at 1006 Broadway in West Somerville. His friend Bill Halligan lived just around the corner. Summers were enjoyed by the McElroy family at Nutting's Lake. Charles and Catherine had a cottage there, and they and the children would escape the heat of Somerville on its shores. Also enjoying the lake was Margaret Coleman, escaping the heat of South Boston and vacationing from her job as a stenographer. Margaret would visit with her aunt and uncle who had a place at the lake.

Margaret and Ted's sister, Eleanor, got to know each other at Nutting's Lake, and

chummed around together. It was inevitable that 23-year old McElroy and the 21-year old daughter of John and Annie Coleman would meet. Soon it was Ted and Margaret hanging around together. On October 26, 1925, they were married in South Boston.

After their marriage, Ted and Margaret lived with his parents. The house was large, and it was practically a tradition that the McElroy boys would live under the same roof with Charles and Catherine when they got married. Changes in Ted's business and personal life were not long in coming. Near the end of the following year, on November 11, 1926, he and Margaret became the parents of a son, John Charles McElroy.

As a married man and father, supplements to McElroy's income were advisable. He began an association with Walter H. Candler, purveyor of "The Candler System" of learning telegraphy. "I owe my skill, endurance and steady nerve to The Candler System," McElroy would allege in Candler's ads. It wasn't true, but the association with Candler helped Candler sell his courses and presumably put an occasional extra dollar in McElroy's pocket.

For the past several years, McElroy had run the Associated Press wire at the *Boston Traveler*. In early 1929 he decided to leave telegraphy behind and enter the world of business, in work that would be as far removed from telegraphy as one could get: He would "enter the field of sanitary engineering," as the *Traveler* put it, to be the New England manager of the Chemical Toilet Corporation of Syracuse, N.Y.

More changes occurred: The McElroy family moved his family to 46 Everdean Street, Dorchester (in the south part of Boston). Ted changed jobs: He sold septic tanks in New Hampshire. Then he became a local representative for the Heatilator Fireplace Company of Syracuse, New York. In this capacity, he installed a Heatilator in the rumble seat of his Model A Ford, the better to explain its benefits to potential customers. And to supplement that income, McElroy took on another company to represent, the Majestic Building Company of Indiana.

There were no official code championships held during this period. Ted had the title, and without a contest, no one could take it from him. But it was a long hiatus, during which potential contenders were working as telegraphers, while McElroy was cruising the woods and ways with a fireplace in his trunk.

And then, in 1933, Chicago hosted a Century of Progress.

CHAPTER 3

I Flopped on Oranges and Lemons

1933 - 1934

The 1933 World's Fair at Chicago, competing as it did with the Great Depression, could not have hoped to be a financial success, and it wasn't. But it was a popular success, and people thronged to witness the various demonstrations of the Fair's theme, "a Century of Progress." Among the attractions were a complete, functioning Chevrolet assembly line constructed by General Motors and, demonstrating progress of a different sort, celebrated fan dancer Sally Rand.

The Fair was also the occasion for the World-Wide Amateur Radio Relay League Convention held on August 3, 4 and 5. This was ballyhooed by the ARRL as "the greatest convention in the history of amateur radio." Speakers such as Dr. Lee DeForest, Herbert Hoover, Don Wallace and McMurdo Silver were scheduled, who would be "limited as to time and will be brief and to the point."

As part of the amateur radio convention, Art Agazin had organized the Code Speed Contests. Lest there be any question as to the importance of the contests, the League had assured its members that the "championship will be unquestionably authentic, since the convention committee has the backing of R.C.A. Institutes, the Candler System, Aeronautical University of Aviation Radio, and others." And Ted McElroy, representing the Western Union, would be there "to defend the title he won during the contest in 1922" at a record speed of 56.5 words per minute.

Toward the end of July, McElroy "dropped in at the Western Union office" in Boston. He had not been a telegraph operator for some six years. Without even warming up, it was reported, he "took a lot of Continental code at fifty words a minute. He stepped this up to better than sixty, and the Western Union people entered him in the competition then and there."

More likely, the Western Union had entered McElroy much earlier, since there was no way Uncle Wes wasn't going to sponsor him. McElroy was still the world's champion, and he was a Western Union man when he won the title. That his old company wanted him as their representative was a foregone conclusion.

On Thursday, July 27, Boston's Mayor Curley presented McElroy with a letter of introduction to the mayor of Chicago. He wished "Teddy" good luck, and, posing for a news photographer with J.B. Rex looking on, handed McElroy a key to the city of Boston.

McElroy then left for Gloucester, to board the *Gertrude A. Thebaud* and begin his trip to Chicago. Appearances along the way at Portland, Maine, and Syracuse, New York, were duly noted by the press.

The code receiving contests, which were open to both amateur and professional radio operators, were held on Friday, August 4th, in the Minaret Room of the Medinah Michigan Avenue Club. The judges for the eight classes of contests were Ivan S. Coggeshall of Western Union Telegraph Company, New York; Lt. Arthur A. Hebert, W1ES, Treasurer of the ARRL; and Lt. Com. Fred

H. Schnell, W9UZ, Consulting Radio Engineer. The big event was the Class A competition. The build-up for the event had been tremendous; 714 amateurs had registered for the contest. Fortunately, they all didn't show up.

BOSTON TRAVELER, THURSDAY, JULY 27, 1933

Off to World Fair Contest

Mayor Curley, left, presenting Theodore "Teddy" R. McElroy, world's champion radio telegrapher, right, with a key to the city of Boston, and wishing him good luck in the forthcoming contest at the World's Fair. J. B. Rex, traffic manager of the Western Union Company, which is sponsoring McElroy's entry, is in the centre.

At 9 AM Friday the Wheatstone tape transmitter started keying the General Radio 1,000-hertz oscillator driving 200 sets of headphones. At the preliminary speeds, two heats had to be held to accommodate the 250 to 300 contestants. Starting at 8 words per minute, the speed was increased in steps through each of the classes of competition. The darling of the contests turned out to be nine-year old Jean Hudson, W3BAK, who won the Class E test at 20 words per minute.

At the end of the preliminaries, seven classes of competition had been completed—from Class H at eight words per minute to Class B at 35. And there were eight men left to determine who would hold the title as World Champion Radio Operator. Among these eight were several amateurs, and at least two professionals: Ted McElroy, defending his title, and Joseph W. Chaplin of Press Wireless. Chaplin had a reputation among his fellow operators as being able to copy anything—as long as he kept his fingernails closely trimmed!

That night, McElroy went out with George Hossfield, a demonstrator for Underwood Typewriter. McElroy had always felt that it was his typing that held him back in code receiving contests, and he probably hoped to pick up a few typing tips that would give him an edge. The night out may not have helped. The next day, Saturday, he mentioned to Coggeshall that "I hoisted a few beers and I just don't feel good."

The Class A contest started at 40 words per minute. After the contest, judge Coggeshall gave his impressions of the sound of the code at these speeds:

> At 40,...you quit worrying about single wrong letters and start hoping you can put a typewritten line down without leaving a word out. At 45,...you quit, but half a dozen of the champs go on....At 50 words a minute, the dots and dashes get blurred and jumbled. The letter O, instead of being designated by three ordinary dashes, comes through as one dash, and that one exceptionally staccato. The common "and's" and "the's" whiz by undeciphered. At 53, it is just a lot of static....

The text sent to the contestants was plain English with simple punctuation and no figures. While the machine setting was accepted at the lower speeds, after 53 words per minute each letter of copy transmitted during the five-minute periods was counted in order to calculate the actual speeds. These were 54.1, 57.3 and 61.6 words per minute. After this last speed, "all contestants were holding up the QRS sign, and agreed they wanted no more," Coggeshall said.

The contest was over; it remained only to grade the papers, and determine the winner. Of the characters transmitted in five minutes, a 1% margin of errors was allowed; each of the Class A contestants exceeded the allowed 15 errors at 61.6 words per minute.

At the next lower speed, 1432 characters had been transmitted in 5 minutes. Based on the five-letter word standard, the speed was 57.3 words per minute. Fourteen errors were allowed. The contestants were known to the judges only by number. Only one contestant, "No. 336," had survived 57.3 words per minute—with 11 errors. At 54.1 words per minute, where 13 errors were allowed, "No. 336" had made five errors while "No. 374" had made eight.

Hiram Maxim, president of the ARRL, made the principal address that evening at the convention banquet. Later in the ceremonies, the new world's Class A code speed champion was identified. Rufus C. Dawes, president of A Century of Progress, was there to present the award. Coggeshall, no fan of McElroy, described the announcement as resulting in "wild acclaim" when Joseph W. Chaplin was named the winner. Chaplin was presented with a 22-inch tall solid silver loving cup "to signalize his achievement," as Coggeshall later wrote, "of breaking McElroy's record which for 11 years had stood at 56.5 wpm...." McElroy had come in second.

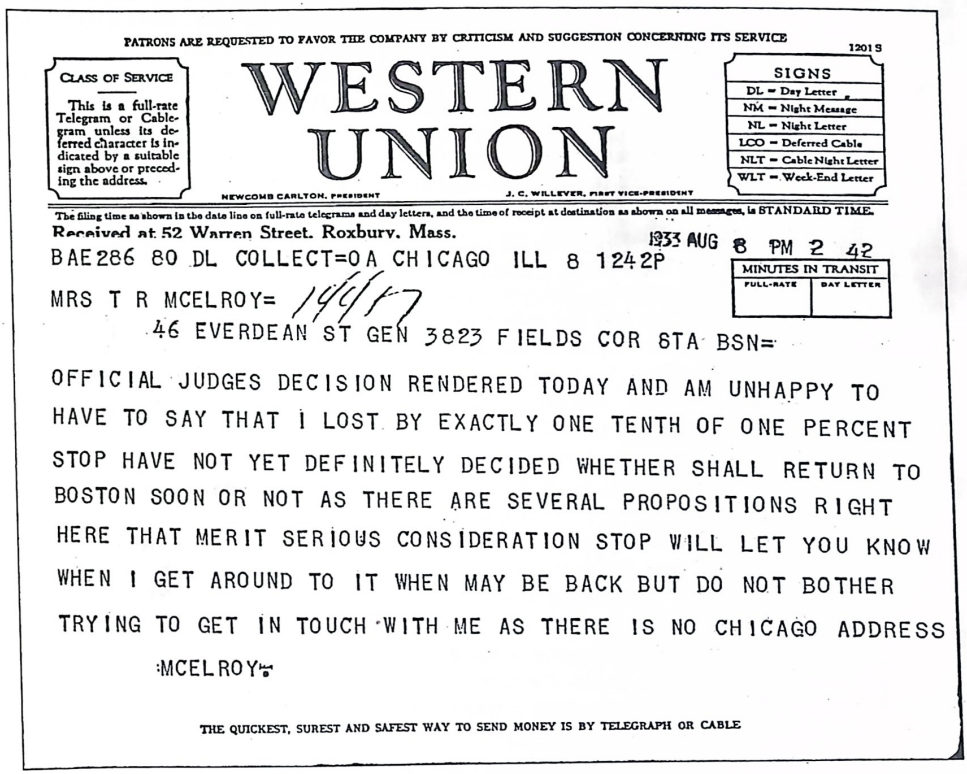
There is no question that Chaplin won, but there is a serious question as to his winning speed. On Tuesday, August 8, three days *after* the contest and the awards, McElroy sent a telegram to his wife, Margaret, in Dorchester, saying that "Official judges decision rendered today and am unhappy to have to say that I lost by exactly one tenth of one percent stop". Was there a question on Chaplin's top speed? Was it tossed out?

If only the 54.1 words per minute results were counted, the "Code Grades" (scoring rules) would have given Chaplin 99.6%, and McElroy 99.4%—close enough so that McElroy might describe it as "one tenth of one percent."

John C. McElroy told me that Frank Borsody once showed him a telegram from the contest officials stating that the judges had erred, and that McElroy had actually won. But Ted never claimed to have won at Chicago, 1933. If the telegram referred to this contest, I believe that its message was not that McElroy had won, but that Chaplin's winning speed had been tossed out—easy enough to misinterpret as a McElroy win.

This interpretation is consistent with McElroy's telegram to his wife, and his later assertion that he was (still) the "world's fastest radio telegrapher" due to his 56.5 words per minute record set in 1922, a claim he could not have made if Chaplin had won at 57.3 words per minute. McElroy's claim was cast into the base of his Mac-Keys (see Chapter 11) and printed on his 1934 business letterhead (see page 155).

For these reasons, I credit Chaplin with the win, but at 54.1 words per minute.



PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

1201 S

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

NEWCOMB CARLTON, PRESIDENT J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS

DL = Day Letter
NM = Night Message
NL = Night Letter
LCO = Deferred Cable
NLT = Cable Night Letter
WLT = Week-End Letter

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

Received at 52 Warren Street. Roxbury. Mass.

1933 AUG 8 PM 2 42

BAE286 80 DL COLLECT=OA CHICAGO ILL 8 1242P

MINUTES IN TRANSIT

FULL-RATE | DAY LETTER

MRS T R MCELROY= 144/57

46 EVERDEAN ST GEN 3823 FIELDS COR 6TA BSN=

OFFICIAL JUDGES DECISION RENDERED TODAY AND AM UNHAPPY TO HAVE TO SAY THAT I LOST BY EXACTLY ONE TENTH OF ONE PERCENT STOP HAVE NOT YET DEFINITELY DECIDED WHETHER SHALL RETURN TO BOSTON SOON OR NOT AS THERE ARE SEVERAL PROPOSITIONS RIGHT HERE THAT MERIT SERIOUS CONSIDERATION STOP WILL LET YOU KNOW WHEN I GET AROUND TO IT WHEN MAY BE BACK BUT DO NOT BOTHER TRYING TO GET IN TOUCH WITH ME AS THERE IS NO CHICAGO ADDRESS

MCELROY=

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

Why did McElroy lose at Chicago, 1933? Summing up his contest experiences, McElroy would later write, "There was one tournament after another. I was fortunate enough to win, until 1933 when I made an awful flop at Chicago where Joe Chaplin of Press Wireless beat me decisively." A couple of years after the test, McElroy gave his reasons for losing the top honors:

> I flopped on oranges and lemons in the contest. And would'ja believe it, to this day I positively gag on whiskey sour because [its] main ingrievances (I'd like to tell you about that one sometime) are oranges and lemons.... At that time I'd had no practice whatever for several years and I guess I was just swelled headed enough to think that I could win without it. It taught me a lesson.

It's surprising that Ted would come up with an excuse so prosaic as a lack of practice, even though it was probably true. But by the time a decade or so had passed, stories more outlandish and entertaining had taken its place. One reporter wrote:

> In the early tournaments Ted trained as if he were an athlete. Taking long walks and runs and watching his diet. He conditioned himself to a razor sharp edge. The strain was terrific and when the time of the contests appeared his nerves were so taut that he could only bat on 56.5 wpm [New York Radio Show, May 24, 1922].
>
> No more strenuous training for Ted after that. He figured he would be more relaxed with a drink now and then. It worked and his output of words soared. Once before a speed contest Ted prepared too heavily with his jug which is a rarity, for Ted is known to be capable of consuming quantities without batting an eye. On that occasion Ted lost his title.

The reference to the lost title had to be Chicago, 1933. And instead of a lack of practice, Ted was too far in the bag. Or maybe, as Barney Nagler wrote, it was something else:

> Nowadays, he never trains for championship competition. In 1933 his wife, Margaret, prevailed upon him to take it as seriously as it deserved. For six months Ted trained, making sure that he got enough sleep each night, eating loads less than the seeming tons of food he usually devours each day. By the time the telegraphy tournament rolled around, he was a well-conditioned shadow of his former self.
>
> That year Ted lost the world championship—by one tenth of one point. "But he really looked wonderful after all that training," Mrs. McElroy recalls. Ted hasn't forgotten either. He's been eating ravenously—and winning laurels—ever since.

That was it—he lost due to too much physical conditioning. But was it only by Mrs. McElroy's urging? Ted told the same story somewhat differently on another occasion:

> Acting upon the advice of a physician and friends, I quit drinking; I dieted; I ran around a suburban horse path in the mornings and shadow-boxed along the way. As a result, I was lousy in the tourney. I wasn't effective, because I didn't have a hangover.

All of the stories were, as usual, full of errors and fantasy, and their source—told to reporters and interviewers—was Ted himself. And lack of practice seems a likely reason. But those in which he attributes the loss to alcohol also seem probable. If alcohol was the cause, the only question is: Was it too much booze, or too little?

Ivan Coggeshall suggested another answer; he thought that McElroy "showed signs of over-training", and that McElroy suffered because "Hossfield's keyboard skill was not transferable overnight. McElroy may have lost, rather than gained, by their association" the night before the test.

As for the real reason he lost in 1933, perhaps McElroy said it simplest and best when he said, "There was no question about it, [Joe Chaplin] was far better than I was, then." And perhaps Chaplin trimmed his nails unusually close that day.

Win or lose, McElroy wouldn't attend a show just for the contest. There were friends to see, demonstrations to be given. Ted joined his friend Albert Tangora at the Underwood exhibit, where they both were demonstrators for the typewriter company.

If Hossfield was fast, Tangora was greased lightning. Tangora was the world's typing champion, having set a one-hour record of 147 words per minute in 1923 on an Underwood. Together, McElroy and Tangora demonstrated the benefits of the Underwood machines to the fair-goers, but for those who stopped to watch, it had to be the two men that impressed them most.

Later, McElroy dropped in on Frank Borsody, who was managing the RCA Communications exhibit. Everyone, it seemed, visited the RCA booth, which had a demonstration transoceanic radio-telegraph circuit set up, with a staff of four radio operators attending to it. Visitors could send themselves a message on the RCA equipment and leave with a tangible souvenir of the Fair. Others would stop by to inspect the communications devices on display. Guglielmo Marconi stopped to talk with Frank and look over the modern equipment, as did Lee DeForest.

Ted's visit to the display gave Borsody a chance to arrange a demonstration of his friend's skill. He recalled McElroy's visit this way:

> When Ted McElroy came by one day, I invited him to sit down and take a little workout receiving some high speed code.
>
> My sending operator, Jack McKessy, punched up the tape, and the receiving operator, right there at the exhibit, let McElroy sit down in his chair, and type down the copy....
>
> Harold Taylor, another transoceanic radio operator from RCA Transoceanic Radio Central Operating Office at 64 Broad Street, who had given Ted his chair for the code test, and I, and Jack McKessy checked the Wheatstone tape speed and it was exactly 76 wpm.
>
> The remarkable thing to me was that, from long association I knew Ted wasn't knowledgeable technically, and yet he copied those technical terms! When Ted finished he remarked, somewhat nostalgically, "Reminds me when you and I, Frank, worked together on the POZ, Berlin, circuit at RCA!"

As to McElroy's accuracy at that speed, Borsody said that "he copied a solid 75 lines, on a long message blank, without one error!" McElroy was good, but not quite that good: the first twenty lines of copy show four errors. Borsody was probably too much a friend and gentleman to call it to McElroy's attention.

Perhaps it took McElroy's mind off the official loss. If not, there were other way to do that. He and Frank went out and got drunk.

McElroy had lost the official code speed test, but in demonstrations like that at the RCA exhibit he could do no wrong. Errors were overlooked and myths were created. A typical one is the glass-of-water story.

It is basically this: McElroy is at a championship contest, banging away at his mill at 60 words per minute or so. He stops. The other contestants, sweating, struggling, continue typing. Ted reaches for a glass of water at his side, takes a long drink, puts it down. Is he finished?

No—his huge hands settle over the machine again and he pounds furiously. He is copying minutes behind, but he loses nothing. The watching crowd is astounded. Of course, he wins the contest. McElroy has demonstrated once again the talents that made him World Champion.

The story is legend, but did it really happen? If it didn't, it should have. Emphasizing McElroy's exceptional typing ability and code memory as it does, the story is a good one to demonstrate those points. And, since Ted was a showman, it's the kind of thing he'd do—if not at a championship match, at least at a demonstration. As John Steinbeck tells us, "myth must somewhere have its roots in reality."

Walter Stiles, W7NYO, observed McElroy pull a comparable stunt during an event in the early 'thirties in New York. Walter took a cab from Fort Meade to the Battery and lugged his Underwood into the hall where Vibroplex was sponsoring a code contest. Ted McElroy was one of the contestants.

When they reached the point in the test where the next speed was to be 65 words per minute, McElroy cracked, "Stop fooling around, let's go to seventy and get the drifters out." Stiles was still in there when they did get to seventy, as was McElroy.

And then McElroy stopped and lit a cigar! Thinking McElroy was done, Stiles continued typing and started celebrating mentally: he had won! But then McElroy put that cigar down, started typing, and caught up.

"That broke me up." said Stiles. "I was thrown off, and started making mistakes." It was all over. When they scored it, Stiles recalled, McElroy had one letter wrong, giving him 69.9 words per minute—a new, if unofficial, record.

Now, you can argue about the details of that story—but you'd be missing the point. A cigar isn't the apocryphal glass of water, but it had the intended effect. It was quintessential McElroy: reckless, entertaining and a bit impertinent.

Sometimes McElroy could be too impertinent for his audience. In the spring of 1934 a code receiving contest was held at the Hotel Astor in New York. Participating in the contest was McElroy and several Press Wireless operators. Another of the contestants was a young fellow—I'll call him Larry—who entered just for the experience. With his average typing ability, he was realistic about his chances against professional operators.

According to Larry's account of the contest, the Press men beat McElroy easily. Larry didn't know Ted, or speak to him, but he did have the opportunity to observe him during the

contest. His impression was that Ted "was not the kindest man I ever saw—rough and easy to criticize an opponent."

McElroy's brashness was more often directed at entertaining his fans. At a 1934 hamfest in Kennebunkport, Maine, one of the events was a code receiving competition. The amateur contestants were good operators; their speeds were in the 35 to 40 word-per-minute range. Toward the end of the formal competition, a new man came in. He sat down at his mill and proceeded to copy 55 and 60 words per minute effortlessly and without error. The local hams were flabbergasted—who was this guy? They soon learned that "this guy," a ringer brought in as a joke, was Ted McElroy. Everyone had a laugh and a good time. Ted didn't merely steal the show, he *was* the show.

Attending the hamfests and playing jokes was fun, but events occasionally intruded to remind the McElroys that they were struggling through the depths of a depression. Ted and Margaret soon were unable to keep up with the rent on their Everdean Street house. The McElroys moved to a triple-decker at the end of Bayside Street in Dorchester.

The second-floor apartment overlooked Savin Hill Beach on Dorchester Bay. There, McElroy continued his telegraphic interests. He had befriended a Japanese Navy officer, who would visit the McElroy home on Sundays and teach Ted the Japanese radio code, or "Kata Kana" code as McElroy called it. American, International or Japanese Morse, it made little difference in the ease with which McElroy could copy it. Before long, the Japanese officer could say, "You're almost as good as I am now on that, Ted."

Learning a new code didn't put bread on the table, but typing could. While he may not have been a champion typist, McElroy was better than most. He continued to put this talent to work by giving typing demonstrations at $50 per showing. And in the fall of 1934 he started making telegraph keys.

McElroy's first key was a "bug," a semiautomatic key that worked like the ones Horace Martin and his Vibroplex Company had been making for thirty years. In 1934, McElroy was just one more among dozens of bug manufacturers. But he thought he had three things going for his key. First was its maker; even though he was no longer the champion, he was still the "World's Fastest Radio Telegrapher". And he said so in his ads, and on the bottom of the bug itself.

Second was frame of his key, fashioned in a Tee-bar design. A Tee-bar wasn't unique on a bug, but McElroy's was unusual since it permitted the key to rest on its side. With the pendulum locked, the bug could be worked like a hand key.

Third was another design innovation. Rather than use a common pivot for the main (dot) and dash levers, McElroy suspended the dash lever from the main lever on its own pivots. To accomplish this, He used a chrome-plated cast brass main lever.

The purpose of these details was to differentiate his product from the others, not necessarily to make it better. To be in business, he needed a product, and now he had one in a bug he could call his own: the Mac-Key. It was, he felt, "an imitation Vibroplex. Not as good as the genuine, but it did work and was within the ham's price range."

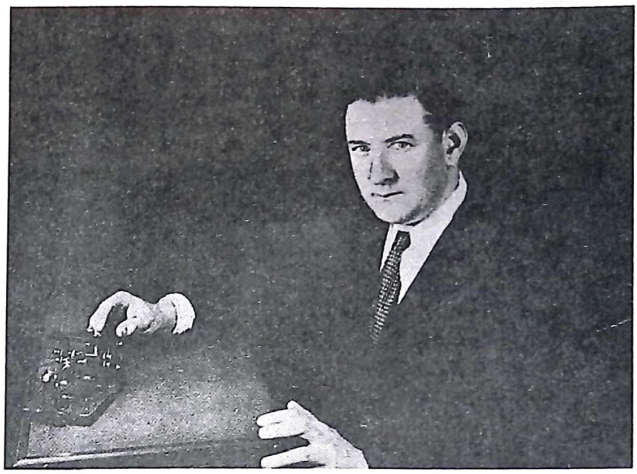
Believing that its features were novel, McElroy applied for a patent on the bug. Although no patent would ever issue for the Mac-Key, the fact that one had been applied for was duly noted on the bug's base and nameplate. A full-page ad was slated for the December issue of *QST*, the magazine published by the American Radio Relay League for its amateur radio operator

members. His friends at the Radio Shack, on Boston's Brattle Street, agreed to carry the key, and would feature it in their own ads in the same magazine. McElroy worked hard to make and promote his new invention.

23 Bayside Street, in the Dorchester section of Boston. The left side of the triple-decker faces Savin Hill Beach. The McElroys had the second floor apartment. (1993 photo)

> ...I did everything myself. I drove my automobile and it was a well used Lincoln convertible sedan. I drove it to the iron foundry and to the brass foundry for castings. I machined those castings in the sun room at 23 Bayside street. Then I took them to the plater and or the painter. Meanwhile I picked up the brass and machined that at home and then took that to the platers. Then picked up the nuts and bolts and screws and took those to the plater. I picked up the wooden boxes down in Chelsea.
>
> And nights and other times I wrote the letters which created the sales and I made out the invoices to collect after selling.

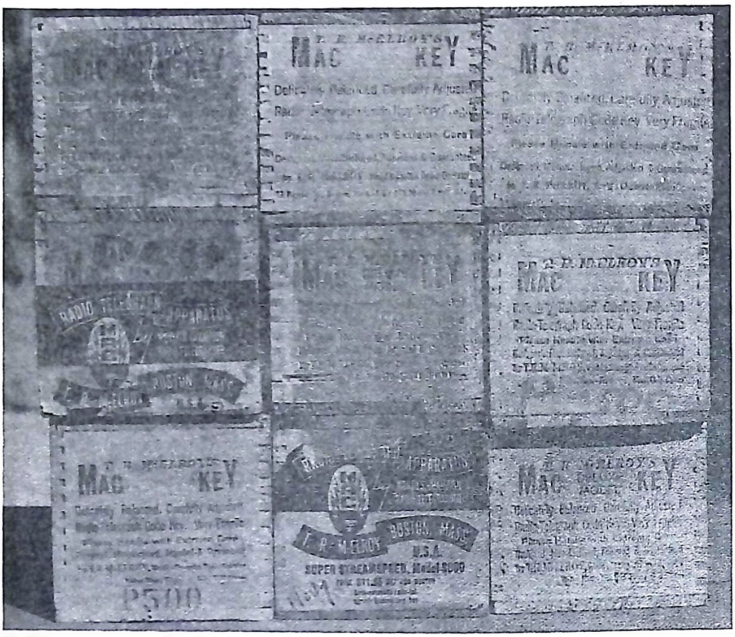
McElroy would continue to work for others for some time, demonstrating typing for typewriter companies, teaching wireless (or "radio" as it was now more commonly called) for the Sam Curtis School. But now he was also in business for himself.



Ted and his 1934 Mac-Key

He knew that the single product he had—his Mac-Key—wasn't enough; he kept his mind open to ideas for other devices in the field he was familiar with. Code practice was one possibility, but Wheatstone machinery was too complex and expensive for the typical telegraph student. Perhaps it could be simplified. Or maybe he could improve upon the battery-operated code practice oscillator that the National Company, in Malden, Mass., had recently announced.

With McElroy's knowledge of telegraphy, and his matchless experience, the possibilities for his new business were limitless.


MAC KEY
MAC KEY
MAC KEY

CHAPTER 4

I Guess It Is Mine This Year

1935

The ballroom of Boston's Hotel Bradford was the site of the second annual hamfest sponsored by the South Shore Amateur Radio Club on the first Saturday of February, 1935. Mark MacAdam, W1ZK, chairman of the hamfest, opened the event at noon by giving a welcoming address. More than 1,200 amateurs attended the meet.

The program included talks, displays and demonstrations of new receivers and other ham equipment. Radio buffs were treated to a display of an oscilloscope; Horatio Lamson, of General Radio Company, demonstrated a stroboscope. Now-Governor James Michael Curley greeted the amateurs "in their own language" by sending his message to the ballroom by messenger, where it was transmitted to the crowd in both Morse and International codes by Ted McElroy.

At 6:00 P.M., McElroy gave a demonstration of high-speed receiving and sending. He also made sure the reporters learned of his new product, conveniently ignoring the fact that Horace Martin had invented the semi-automatic key more than three decades earlier. It was duly reported that "McElroy is the inventor of the 'Mac-Key' or 'Bug,' as it is called by operators." Not for nothing did McElroy attend these events.

On the evening of March 11, Ted attended a meeting of the Cape Cod Radio Club at Hyannis, Massachusetts. He was there not to be entertained, but as the entertainment. He was going to give a demonstration.

As the Club members and guests looked on, a Wheatstone tape of plain language text was unsealed and run through an automatic transmitter. McElroy, copying on his typewriter, copied up to what he felt was his top speed, for three minutes without error.

McElroy's copy was checked by three members of the radio club. The final speed of the Creed transmitter was checked by running a tape through the machine with the word "tests" continuously on it. The check tape, timed for half a minute through the machine, indicated a speed setting of 90 words per minute. However, since "tests" had 18 tape center holes, and the club considered a 21 center-hole word as standard, the members certified his speed at 77 words per minute.

So extraordinary did they consider McElroy's performance that the club members and official observers prepared an "Official Statement" for McElroy to memorialize the event. The first paragraph read:

> This is to state and confirm that on the evening of March 11, 1935, before an open meeting of the Cape Cod Radio Club, attended by Amateur/Professional and other interested Radio people, we monitored and saw you copy the equivalent of 77 words per minute accurately, a plain, simple news story, originating in a Boston newspaper.

Official Record
Never Equalled
56½ WPM
Chicago, 1922

Authentic Record
Not in Tournament
73 WPM
Chicago, 1933

T. R. McElroy

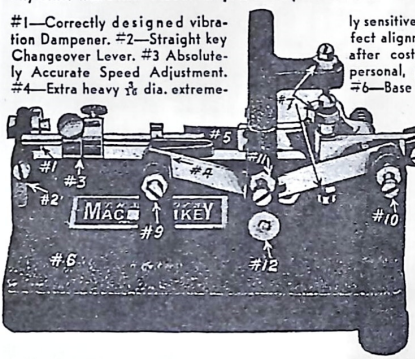
*World's Fastest Radio Telegrapher**

*Official champion of the world, 1922 to 1933

Announcing
The

MAC-KEY

"I'll not write a lot of bunk about my key. I'll tell you these truths: Each MAC-KEY is adjusted by myself and shows perfect speeds 8 wpm to 45 wpm; each is an exact duplicate of the key with which I've established records in sending Morse & Continental code these past 15 years. Each is sold with my guarantee that you can send better with a MAC-KEY than with any other instrument made—or your money refunded after 5 days trial."

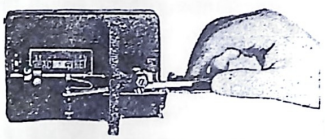


#1—Correctly designed vibration Dampener. #2—Straight key Changeover Lever. #3 Absolutely Accurate Speed Adjustment. #4—Extra heavy ⅜ dia. extremely sensitive contact points, on bars for perfect alignment. #5—Main spring selected after costly metallurgical research and personal, painstaking experimental work. #6—Base and superstructure one piece, extra heavy casting. Rigidity necessary for securance of smooth, rhythmical sending. #7—Dash lever suspended from main lever. This is one of the most important features of my key. All levers swing on tool steel pinions between hardened trunnions. #8—Lever full hand width above table where it must be for correct sending. #9 and #10—Dot and dash contacts, heavy or light, by fibre tip screws, without changing faces of contact points. #11—Dot lever stop adjustment. #12—Binding post, other post opposite.

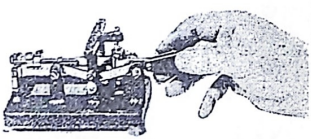
I emphatically assert that my key is the only one made with which it is possible to send perfect Continental code with its multiple dash figures and letters. Read those specifications again. Take another look at my guarantee, then see your local dealer or write me direct. Price $17.50 F.O.B. Boston. Temporarily subject 40% discount. Whether I can continue this customary discount depends on volume. I urge your immediate action if you want to be able to send code such as you never dreamed you'd ever be able to send. 73's everybody, Mac.

T. R. McELROY

23 Bayside Street, Upham's Corner P. O., Dept. R1 Boston, Mass.



A Perfectly Balanced Straight Key



Beautifully Designed, Semi-Automatic

Ted McElroy's second ad appeared in the January 1935 issue of Radio *magazine, and showed the second model Mac-Key. A cast support for the stationary dot contact had been added.*

Those present seemed to believe that they had witnessed a historic event. The statement acknowledged this, ending with, "This is the fastest and most remarkable telegraphic achievement of all-time, and we congratulate you, OM."

With the help of the statement, the speed of 77 words per minute would stand forever as McElroy's fastest achievement in code reception. It was, however, an unofficial record, set at a demonstration rather than a contest. And those who would later cite it with admiration or pride—including McElroy himself— would conveniently overlook the liberal timing standard that had been used.

Contests and demonstrations served a pragmatic function for McElroy; through them, he promoted his telegraph keys. The Radio Shack illustrated his Mac-Key prominently in their *QST* ads for January and March. By that time, however, McElroy had already made the first of many improvements to the bug. Buyers of his keys might not get exactly what they saw in the ads, but it was made by Ted McElroy and it was still a "Mac-Key."

Later in the year he added a second model Mac-Key, the "Junior model." This was an inexpensive bug with a stamped steel base and frame. And he again modified the standard cast-iron key; an obvious change was the pivoted damper with height adjustment.

McElroy also began to advertise his "Mac-Auto," an inked-slip code practice transmitter for "less than 100.00." He had been looking for an inexpensive substitute for perforated tape and Wheatstone automatic transmitters for code practice, and had hit upon the idea of using a phototube to read inked tape. The solution occurred to him one day when

> walking through a doorway to a bar room with an exciter lamp at the right and photo tube at the left, broke the light rays onto the photo tube which energized a relay and opened the door. Sez I to myself: 'If this thing will do this, I can put Morse dots and dashes on a paper slip 3/8" wide by a fountain pen and afterwards drawn said slip between an exciter lamp and photo tube and thus have a limitless and low cost source of Morse code practice.

Notwithstanding his ads, however, he was still in the development stages of the device. It would be more than a year before he would have it in production.

But still, promoting his products might carry more weight if he were the radiocode receiving champion. And the opportunities for publicity would be more abundant. After all, it was the winner the reporters interviewed, not the runner-up. The chance to redeem himself from his 1933 loss arose practically in his own back yard. And this time, McElroy would take no chances. He wanted his title back.

The 1935 Brockton (Massachusetts) Fair was held September 8th through the 14th. It was a typical New England country fair, featuring everything from horseshoe pitching demonstrations by the 1932 American Champion, Jimmy Risk, to calf roping. "The auto races, with many of the best dirt track drivers in the country competing, was the magnet which drew the crowd." At least 15,000 people filled the stands to see Chet Tabor from New Jersey, Verne Orenduff from Philadelphia, and other racers who had come from as far away as Los Angeles.

The magnet for radio fans was the Radio Show coordinated by Mark MacAdam, and the big event of the Show was the "International Radio Code Operators' Speed Contest" which

would be held on Saturday, September 14. Whetting their appetite and giving the radio amateurs a taste of what the professionals would be doing was the "Amateur Radio Code Operators' Speed Contest" held every afternoon of the fair—except, of course, for the last day of the fair when the pros took over.

In addition to the code contests, the Radio Show featured activities which are popular at major hamfests to this day: Displays of new equipment, lectures on operating practices, and demonstrations of radio apparatus. But the radio event which would receive the most publicity long after the Fair ended was the code contest among the world's best commercial operators; Press Wireless, Postal Telegraph, Western Union and the other companies were invited to participate. Joe Chaplin, of course, represented Press Wireless. McElroy was one of those to receive an invitation to compete:

> The first I knew of another big tournament was a notice from Mark MacAdam, W1ZK, who was superintendent of the Radio Exposition of the Brockton Fair. The sheet set forth that a 'wide open tournament' for official championship of the world at radiocode reception was to be held at the Brockton Fair, Saturday, September 14th. I received the notice about two weeks prior to that date and immediately got busy with some practice. A friend of mine, Frank Borsody, W2AYN of Brooklyn, N.Y., prepared perforated tape with which to practice. It was also Borsody who designed the high-speed transmitter used in the tournament and allowed me to use it to practice with.

Notwithstanding his alleged disdain for practice after losing in Chicago, McElroy brushed up on both typing and code reception. Since he was now a demonstrator for the Royal Typewriter Company, he would be using a Royal machine. In addition, the company saw to it that he had the help of the fastest typist in the world, who was now one of their spokesmen and demonstrators. McElroy "had the advantage," he later said, "of being faithfully coached in typing by Albert Tangora whose services were made available for the purpose by Mr. Stonehouse of the Royal Typewriter Company."

Frank Borsody helped McElroy in the receiving department by providing code tapes and a tape transmitter. Ten days before the contest, McElroy was full of confidence in his abilities. On September 4, he wrote to Borsody:

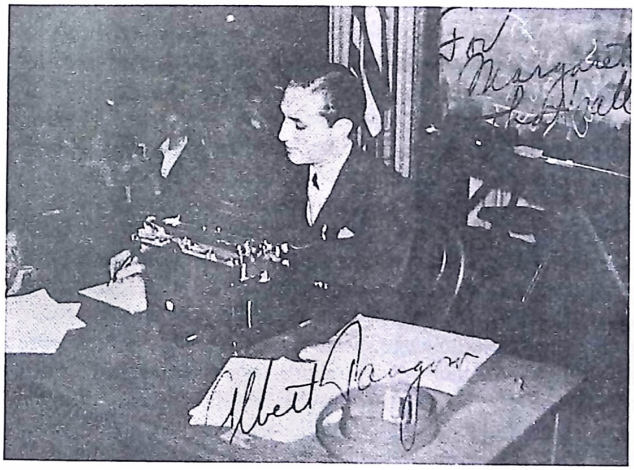
> [T]he tape that you sent me, which by the way I burn up in the furnace as soon as I use it, has helped me an awful lot in preparing for this tournament. So all things considered you have been the best friend to me on this code racket that I've got.
>
> I cannot understand how I can fail to win it this year, Frank. So help me God, as I sit here in this chair, I am copying SOLID without a single error, for five or ten minutes at a time, at 70 words per minute and I cannot understand how any God damn man living can do the same because I know that the signals I am copying cant be read by anyone else. That is, without error.
>
> They have a swell operator at RCA Boston, named Carter who is going in the tournament and he was out the house listening

to me copy and he simply could not understand it. So I guess it is mine this year.

McElroy's confidence was high, but he faced tough competition. He'd be going against the best in the world, including Joe Chaplin, who had taken his title two years earlier. But if he had any concerns at all, they had more to do with personal animosities, real or imagined, than with code ability. His letter to Borsody continued:

> The only worry I have now is that the New York wise guys will holler "in the bag" or that on account of using capital letters I won, or something. Jesus, it is tough to be faced with that kind of yellow dog competition.
>
> I wrote an awful nice letter to Joe Chaplin of Press Wireless asking him how he was making out and he didn't even answer it. And I then wrote to Joe Lynch the supervisor at Press Wireless and he didn't even answer it. And Mackay Radio have been writing and sending telegrams protesting about this, that and the other thing. Christ almighty what cry baby guys.

Any personal resentment that Press Wireless may have felt toward McElroy might have been due to a perceived favoritism toward him by the contest promoters. He at least might have been suspected of having a degree of insider status; two of the people most closely involved with the contest were personal friends: Mark MacAdam and Frank Borsody. McElroy's letter to Borsody closed with, "Well, Frank, be sure to be rooting for me...."



Ted's friend Albert Tangora, who coached him in typing. The photo is inscribed "For Margaret: That's All"

McElroy drove the fifteen miles from his home to the Brockton fairground each day to mingle with his friends and to participate as a judge in the amateur contests. Some of these were speed contests; Bob Ruplenas, W1DDO, was awarded a "little silver loving cup" naming him the "semi-automatic key champion of New England" for his 26 words per minute run with a bug. Since accuracy as well as speed was tested, Ruplenas wasn't too surprised when the straight-key winner beat his 26 words per minute. Another amateur event tested "all-around sending" ability; in this contest, the participants attempted to send one sentence (usually, "The quick sly fox....") with each of a straight, cootie, and left and right handed Mac Keys. Mark MacAdam won this event; McElroy presented him with an engraved Mac-Key.

Finally, at week's end, the contest everyone had waited for arrived. The start was delayed while Frank Borsody punched the tapes. Lingering suspicions among the contestants contributed to an unpropitious beginning, but McElroy passed off the dispute as simply a technical matter in his version of the event:

> The rules called for punctuation consisting of commas and periods to be perforated and put down by operators. Also proper names and sentence beginnings to be correctly capitalized. When some questions arose among contestants in this connection, the judges, Lloyd Greene of the *Boston Globe* and Joe Toye of the *Boston Traveler*, insisted that inasmuch as it was straight English press matter that it should be so transcribed. There was no further question on this and it is significant that at the end of the contest, every operator expressed himself as highly pleased at the efficient manner in which the contest was run. The two newspapermen judges were guided in large measure by Charles Kolster, radio inspector for the First District. Other officials assisting in running the contest were: R.F. Tropp, code instructor at a Boston radio school; J.F. Rigby, superintendent of RCA, Boston, and Frank Borsody, W2AYN, Brooklyn, N.Y., who handled the actual transmission of the tape. Material for the contest was selected right at the time of the event, out of a heap of old newspapers. Each judge selected several thousands of words, and then handed the selection to Borsody who perforated what was necessary out of the entire lot. This is the first time that test material has been so selected. There could be no chance for any doubt or question. This angle, too, met with unanimous approval of all contestants and their backers.
>
> The first run (9 p.m. Saturday evening) was at 54 words per minute at which point all five contestants made perfect or nearly perfect copies. The next run was 58 words per minute at which point John Carter of RCA Boston, made several errors and was eliminated, although permitted to continue. This was Carter's first tournament appearance...and he must have been a bit nervous.... The third run was at 61 w.p.m. at which point Chaplin made a large number of errors because of typewriter trouble. Chaplin is

> probably as fine an operator as ever hit a key, but is handicapped by lack of typing speed. At this speed Vincent Kearney, winner of the office tournament at Mackay Radio New York, was out on errors. Kearney...[was] handicapped by necessity for capital and small letters on the typewriter. Jack Donnelly, winner of the Hudson Division Convention speed test, also had typewriter trouble. All contestants were allowed to continue, however until final run of 69 words per minute. Up to this point I had made no errors of any kind whatsoever. I guess it was my lucky day.
>
> At 69 words per minute I made what I thought at the time was a perfect copy. Check by the judges indicated that I'd made one error, I'd transcribed the word 'inefficient' where it should have been 'ineffective.' So that the official judge's ruling was that I won with one error. It just goes to show that at that speed it is difficult to know that you've made a perfect copy.
>
> It was a splendidly conducted contest, no friction and no questions. The contestants were friendly and they whole-heartedly congratulated me on winning and moreover I know they all really meant it. Joe Chaplin is such a brilliant operator the judges asked him over and over again if he didn't want another run. Joe asked, "Mac, whaddayuh think?" I said: "Joe, I'm all in, but we'll have it if you want." Joe, like the real guy he is, sez "Aw the — with it. I'm tired too. Let's get outta here and get a few drinks." So ended the most important radio code tournament I've ever seen conducted....

In his story of the contest, McElroy had cleverly glossed over a major problem that arose at its end. Much later, this issue would result in a rumor that he had actually lost the event. The difficulty is recognized with the question, Why had the judges offered Chaplin another run?

McElroy later said that it was Joe Toye who "had been working on Chaplin, the champion, to try a new run—and I was never too certain I could beat him." But the offer to Chaplin that he try again certainly wasn't made because he was "such a brilliant operator," as McElroy disingenuously suggested. Many years after the match, contestant Jack Donnelly referred to the problem (and McElroy's faulty memory of the speed) in a letter to McElroy:

> When you won the so called worlds championship contest in Brockton when we were young Maggie the speed was 67 WPM. Now 20 years later and a pot belly its 77 and if Joe Chaplin and myself werent members of the Charitable Irish Society we would have blown the whistle on you for that loused up tape in Brockton.

So because the tape that McElroy's friend Borsody had perforated on the spot was "loused up," the judges felt compelled to offer Chaplin the opportunity to re-run the final heat. The procedure under which there was supposed to be "no chance for any doubt or question" ended up creating the biggest problem of all. But Chaplin declined the offer. McElroy retained the win and regained the world championship title.

The ARRL account of the Brockton contest, given to its members in the October issue of

QST, resolved the question of the problematic tape by not mentioning it at all. The League's account also differed in several minor respects from McElroy's version. But where McElroy told his story from the contestant's perspective, the *QST* version told it from the audience's:

> Those who witnessed the tournament could but marvel at the ease with which all participants copied speeds which sound like a mere "jumble of dots and dashes" to the average operator. We even wonder if it were not more of a thrill for the onlooker than for the contestant! Hats off to the new Champion—Ted R. McElroy!

A local newspaper story on the Fair datelined September 14 reported that Chet Tabor won the dirt-track final; Perry V. Greene of Maine won the log chopping event; and that "The winner in a world's champion radio code contest held at the fair tonight was T.R. McElroy of Boston, who copied 69 words per minute with two errors, setting a new world's record."

McElroy freely dispensed his appreciation to others for his win. Frank Borsody, who made tape transmitters; Bill Halligan, manufacturer of the Hallicrafters radios; and the Royal Typewriter Company all received telegrams or a mention in an article he wrote two months after the contest.

The official presentation of the silver loving cup for the Brockton win was made to Ted McElroy at a meeting of the Veteran Wireless Operators' Association on October 21 at the Hotel Manger in Boston. Mark MacAdam and Charles Kolster took turns being photographed handing the engraved trophy to McElroy. The engraving read:

Brockton Fair Radio Show
World's Championship
Radio Code Tournament
won by
T.R. McElroy
Speed 69 W.P.M.
Brockton, Massachusetts
Sept. 14, 1935.

McElroy was not one to miss an opportunity for self-promotion. Conveniently disregarding the fact that it was a receiving code contest, McElroy explained to the reporters who were present how he had regained the title:

> McElroy said...that this big jump to 69 words per minute from his old record of 56½ words per minute was made possible by his invention of a new type of radio transmitting key, called the Mac-Key. The old type of key lay flat on a desk and was worked with fingers. McElroy's new key is raised from the desk and is worked with the palm of the hand sideways, making it possible for one to use the whole arm instead of just fingers.

McElroy advised his audience and the assembled reporters that he was "now manufacturing his invention."

Brockton Fair Radio Show, September 14 1935

Theodore R. McElroy, about 1935.

CHAPTER 5

It Should Have Said G-I-N

1936 - 1939

McElroy closed 1935 and opened 1936 with an ad in *QST* thanking "the nearly 2,000 operators who've purchased Mac Keys this year. I'm grateful to the nearly 200 distributors who display and stock Mac Keys, thereby helping both the operators and myself. I promise faithfully to continue, during 1936, making the finest code equipment I can."

McElroy was undoubtedly exaggerating the number of keys he had sold, but the "nearly 200 distributors" might have been accurate. Particularly if he included such small "distributors" as his cousin Walter Vetromile, who ran an occasional classified ad in the back of *QST* magazine and sold the keys by mail-order from his home.

McElroy would expand his product line in 1936, but to supplement his income, he also taught telegraphy in the evenings. The impressive locations were publicized—Massachusetts Institute of Technology, "Mass. Tech.," Harvard. His course was grandly titled "The Art of Radio Communication." No matter the location, it was probably typical of his course at M.I.T.—a series of lectures, demonstrations and instruction on the code for the University Extension Division of the state Board of Education.

January 13 of the new year found "Teddy McElroy" in Washington, D.C., sitting "in the close and officious atmosphere of the navy department today as bids on 250 radio transmitting keys were opened. Down from Massachusetts he had come, hoping that his invention, a semi-automatic transmitter, might receive favorable consideration when the government contracts are let." This would be the first purchase of speed keys by the Navy.

A year earlier, in late 1934, McElroy had received an inquiry from the "office of the Imperial Japanese navy" regarding prices on his keys boxed for export to Japan. He sent the letter to the "navy department in Washington with an offer to place his device wholly at the service of the United Stated navy". The Navy's Bureau of Engineering rejected his offer, saying that "Such 'bug' type keys as there are in use throughout the service are the private property of the individual radioman." Seizing the opportunity for free publicity, McElroy "disclosed" the rejection to reporters, and quoted the Navy's letter of rejection, which he "was amazed to receive...."

Whether it was the adverse publicity, or simply the idea of purchasing bugs, the Navy eventually came around to McElroy's way of thinking. And now, in 1936, he did receive "favorable consideration," but the Navy required him to make certain changes to the Mac Key he sold to amateurs. Since he had been incorporating changes to the design every few months anyway, it could not have been a problem to accommodate the Navy. And it gave him the opportunity to promote it to amateurs as being "quite a lot better because when I had to make up special dies...to make extra special speed keys on an order from a certain government department...I was able to make an awful lot of improvements...."

The Navy order led McElroy into another product, albeit a small one: the "Mac Cord." The Navy required his bugs to be supplied with a cord-and-wedge; this device is used to connect a speed key to the hand key normally installed on a radio operator's desk. McElroy made extra wedges, two thousand of them, and offered them to amateurs and students for one dollar each.

There were other products. Early in the year McElroy announced a code practice oscillator for students of telegraphy. Inspired by an oscillator produced by the National Company in 1934, and aided in the design by friends at M.I.T. and by Kyle Fleming of Trans-Lab, he developed the "Mac Oscillator." The novelty of McElroy's oscillator was that it would operate from AC or DC, and "For men on ships, it'll use ship juice". He sold it, without tubes, for $3.95.

And finally, in 1936, McElroy was ready to go into production with his long-delayed ink slip transmitter. The "Mac Auto" was a code practice tape transmitter with built-in oscillator. McElroy billed it as "The first and the only automatic code machine using photo-electric cell."

McElroy's use of a phototube, and the ability to vary the motor speed electrically, meant few moving parts in his design. Priced at $69.00 when it finally came out, McElroy more than met his goal of the under-$100 price he had been advertising for a year. It was, he wrote, "incomparably superior to any automatic ever heretofore built."

That was a sales pitch. The Mac Auto wasn't, and was never intended to be, superior to Wheatstone equipment. "I never felt and I never made the claim," he admitted some years later, "that inked slip with a phototube keyer was as good as perforated slip with a regular commercial keyer, but...it was the only way that you could wind up with almost unlimited quantities of practice tapes at low cost."

Initially, McElroy thought that the Mac Auto would "probably be handled by Candler in connection with his course" as well as by the radio distributors who retailed McElroy's keys. But Walter Candler may have thought the price too high for his mail-order code lesson students; it doesn't appear that he was an outlet for McElroy's machine.

While he was developing the Mac Auto, he was also working with his brother Howard on a radio receiver he called the "Mac Marine," designed "for marine wavelengths." Either his time was committed to the tape machine, or a receiver was beyond their financial and technical abilities. Whatever the reason, the Mac Marine project was eventually dropped.

Ted McElroy wasn't merely a manufacturer-wholesaler. His was a small business, and he took an active part in promoting and selling his wares retail to the public. He'd rent booths at the radio shows and hamfests, the better to demonstrate not only his keys and code devices, but his own expertise—which, the implication went, was due in no small part to the use of his products.

He travelled to all of the hamfests and shows within driving distance of Dorchester. He appeared at the Falmouth Hotel in Portland, Maine, and the Y.M.C.A. in Syracuse, New York. In Massachusetts he surfaced at the Hotel Bancroft in Worcester and the Civic League building in Framingham.

His booth at the 1936 New England Division A.R.R.L. Convention held at the Hotel Bradford in Boston was typical. On display were his Mac Keys and code practice oscillator. It was also the occasion of the first public display of the Mac Auto.

The convention was held in conjunction with the annual meeting of the Veteran Wireless Operators Association, and incorporated the annual Boston Hamfest. McElroy catered to the

amateurs by holding code speed contests and the usual four-key "all around sending" contests all day long. The winners went home with—what else?—new Mac Keys.

In the summer of 1936, young Jackie McElroy was doing the things boys did when they were nine years old, one of which was going to scout camp in New Hampshire. One of the counselors was a "ham" operator, and one of the things to do at camp was to learn about radio, and the Continental code.

Ted McElroy was in a position to help; he donated some code practice equipment to the camp. Soon, he and the camp counselor were drinking buddies. He got caught up in the idea of amateur radio, and decided to get his amateur license. Maybe it became a personal challenge—could the world champion radiotelegrapher earn his ham ticket? Perhaps he was thinking of the recent Boston Hamfest, where he could only describe himself in the program as "The Friend of the Amateur," without call letters of his own.

He studied one of the popular references of the time, *Radio Theory and Operating* by Mary Texanna Loomis, and in short order had his license: W1JYN. "It should have said G-I-N," he'd joke, "'cause that's what I like to drink." It was a joke based on the truth: While S.S. Pierce Scotch was a staple, his summertime drink was gin and Moxie.

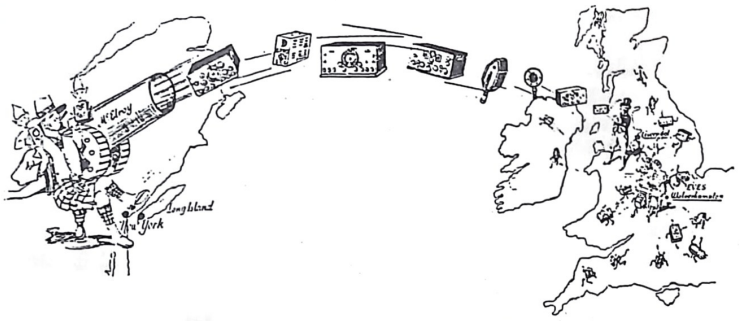
In the fall of 1936, McElroy teamed up with an Englishman, Reginald Adams, who ran a shop called Eve's Radio Limited in Wolverhampton. Reg held an amateur license, G2NO, and the two might first have shared their interest in ham radio; Adams's shop was a regular meeting place for many of the local hams. In any event, McElroy and Adams soon "joined to assure fast efficient delivery of every American radio product," as their ad stated in the October issue of *Television and Short-Wave World.*

On this side of the Atlantic, McElroy joined with his friend Bill Halligan to supply Hallicrafter's radios to Eve's. Naturally, another American product featured in Eve's 1936 ads was "McElroy's Famous Bug Key, obtainable only from Eve's."

The association with Adams was the beginning of a long relationship during which McElroy would come to consider Adams his closest friend. Adams' wife (he married in 1942) would recall that "Reg and Ted were as different as chalk and cheese, Ted being a larger than life character in every way, whilst Reg was slim and unassuming—a real gentleman." Adams himself "always said about Ted that when they made him they threw the mold away."

Adams opened up to McElroy a lucrative market for American radio equipment. The following year, Reg closed his Wolverhampton shop when he and McElroy joined forces with H.W. Stewart, G2CY, and E.J. Pickard, G6VA, the owners of Webb's Radio in London. The four were "all experts in their particular sphere, all determined to give the British amateur every assistance." The move of some 125 miles for Adams may have been prompted by the fact that his association with Webb's made it "the leading Amateur supply house of Great Britain." In addition to Hallicrafters radios, Webb's stocked Collins and Hammarlund equipment—not to mention "McElroy's 1938 Bug Key, obtainable only from Webb's."

In 1937 McElroy moved his fledgling business out of his 23 Bayside Street home to the second floor of 175 Congress Street, Boston. Now it was a real business, with an office and—once he had hired John Contini, his first employee—a staff. It was there, on a Saturday in September of



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G2NO (H. R. ADAMS) and **W1JYN** (TED McELROY) of

EVES RADIO LTD., Old Mill Street, WOLVERHAMPTON.

Authorised Distributors in England for

HALLICRAFTERS : TOBE : R.M.E. : TAYLOR : HARVEY : COLLINS

A few items from our list:—

HALLICRAFTERS SKY CHALLENGER:—9 tubes; 1 stage R.F.: 7.5 to 550 metres; B.F.O.: Std. Bi.: 230 volt input.
Price complete, £23. Xtal Model, **£25.**

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HARVEY U.H.X.35 TRANSMITTER:— 2.5 to 20 metres: RF Line-Up: 42, RK25, 2/RK25's, RK37, Audio output 6L6's in Class B, 3 Separate Power Supplies, 6 Meters, Xtal Mike, Bliley Xtals. **Price of TX complete** for one band, **£82. Complete all bands, £110.**

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New CERAMIC TUBE SOCKETS. All types. Octal, **1/3.** Octals, **1/6. STEEL AND ALUMINIUM PANELS AND SUB BASES:**—Bases: 19" x 12" x 3", 17" x 12" x 2" or 3". All panels 19" long x 5", up to 16". All finished Black Japanned and Crackle.

1937 LITERATURE:—"ARRL" Handbook, **5/3.** Maps, **4/6. Jones** Handbook, **7/-**; Antennae Handbook, **2/6**; **RCA** Tube Data Book, **1/3.**

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All Thordarson and UTC Transformers for 6L6 in stock.

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EVES RADIO LIMITED

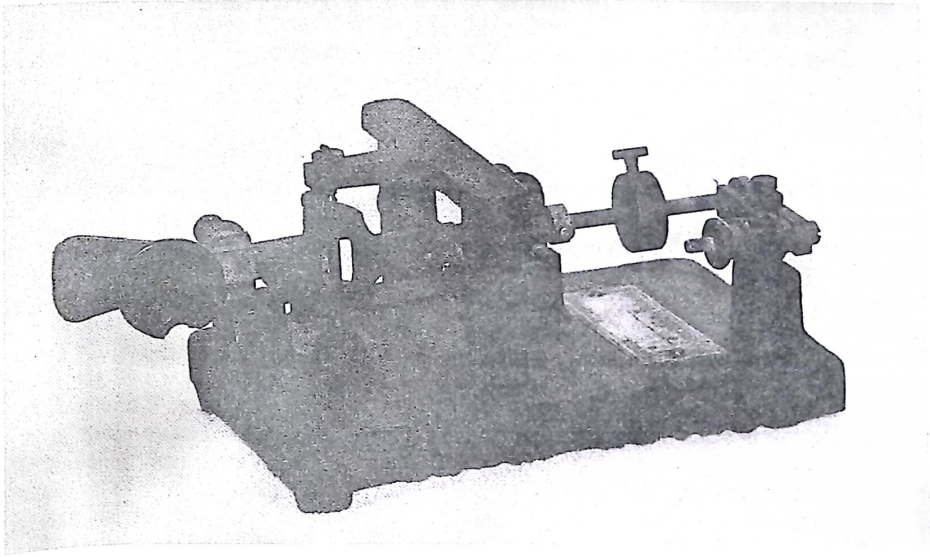
OLD MILL STREET, WOLVERHAMPTON.

Ad in May 1937 British magazine "Short Wave" shows McElroy "shooting" American products to Eve's in England.

that year, that Don Hawley, W4ZU, met McElroy. As Don recalled:

> I was aboard a U.S. Navy destroyer, USS Tillman, that put in at the Navy Shipyard at Boston. One of the ship's company radiomen had saved money to buy a Mac-Key and code practice oscillator, and when liberty time came on Saturday three of us rated radiomen went ashore and found our way via subway and streetcar to the [23 Bayside Street] address we had from an advertisement for Mac-Keys in a radio magazine.
>
> The address turned out to be Ted's home ... He had just recently moved into a loft where he was then manufacturing his keys. We were given the address and started back to the streetcar line when we were overtaken by a man driving a car who had come from McElroy's home ... who took us to [175 Congress Street] and where Ted was working alone.
>
> Our radioman who had the money saved bought a brand-new key and oscillator, and the second man made a deal to buy a used key that Ted checked and gave him a good price on, which left me as the one without a key (or much money). Ted looked around and found an older model which had a damaged knob where someone had hit it with a hot soldering iron ... He put a new "U" spring and contact on it and gave it to me.

The new model purchased by the radioman was likely the "new 1938" model, which



The 1936 Mac Key that Ted gave to Don Hawley. Note damaged knob.

McElroy had announced just a few of months earlier. The "older model" bug that McElroy gave to Hawley was a 1936 model, the third variant of the Mac Key. In addition to designing oscillators and tape machines, he was still fiddling with the design of his bug.

When the business had been concluded, McElroy probably couldn't resist the temptation to demonstrate his abilities to the three young Navy radio operators:

> After the key transaction was completed Ted took us across the hall to where a man had opened an operator's school, and I believe the man was also working alone on Saturday. There were code sending machines there, as well as typewriters—telegrapher's and regular "mills." Ted gave us a demonstration of his world record ability, and we were quite impressed. He used a standard typewriter and capitalized proper nouns, indented paragraphs, and double spaced between paragraphs. We could make out short words such as "the", "and" etc., but not much more. Ted said that it was about 65 wpm, as I remember it.

McElroy wanted all of his customers to be satisfied—especially if it meant making a few dollars. In the late 1930's, Russ Loud bought a new Standard model Mac Key from McElroy. Some time later he noticed that Ted had come out with a Deluxe model, one having a pretty false marble finish—"Marbleite," as McElroy called it.

Taking his Standard Mac Key, Loud travelled to Boston and found the brick building in which McElroy's shop was located. He walked down the hall and knocked at McElroy's door. Ted answered, and led Russ into the shop.

In the dark, dreary room, Loud noticed three or four people at benches, assembling keys and other equipment. He made his proposal to McElroy: He'd like to trade in his Standard model for a new Deluxe. Ted said that for the trade-in, plus an additional three dollars, it was a deal.

"McElroy seemed so pleased to make the exchange," Loud recalled later, "and anxious to get that three dollars."

In the autumn of 1938, the World of Tomorrow Exhibition was to be held in Boston. It was an occasion ripe for promotion. The *Boston Herald* scooped the other local papers with a November 1 photo of McElroy seated behind a typewriter; a Mac Auto is on the desk. He is surrounded by the cast of "Leave It to Me," a play running in Boston, as they watch him "practice for defense of his title at the World of Tomorrow Exposition...."

Marjorie McBride promoted the part McElroy would play in her "Girl About Town" column for November 10 in the *Boston Evening American*:

> Newspapermen who have always used the two-finger-hunt-and-peck typewriting system are interested in an unusual bout which will be staged at the World of Tomorrow Exposition, Mechanics Building, starting Saturday.
>
> Teddy McElroy, former newspaper and news service telegraph operator, will take on all challengers in defense of his title of world's champion telegrapher.
>
> His official record is 69 words a minute, as it is received in code via wireless. He can do faster time than that, but not for

exhibition purposes.

> If you think telegraphers have to have acute powers of concentration, Teddy will disillusion you. He says he can talk to anyone during a championship test and often finds his mind wandering and wondering what he'll do afterwards!

The test was held on November 16. The next day, the *Boston Traveler* reported the event under the headline "75-Word Spurt Betters Telegrapher's Own Mark":

> T.R. McElroy, former newspaper telegrapher, broke his own world's record of 69 words a minute yesterday by receiving a wireless message at 75 words a minute, without an error, at the World of Tomorrow exposition at Paul Revere hall.
>
> He defeated Jack Donnelly of New York, whose best showing was 59 words a minute. McElroy has held the world championship since 1931, with the exception of a period in 1933 when he lost the title to Joe Chaplin of New York and later regained it.

There seems to have been nothing official about the event; even McElroy never claimed the mark as a record. But with no less than eight news articles gleaned from this one event, he appeared to have set a record of another kind.

McElroy wouldn't hesitate to blow his own horn, but neither did he hesitate to help his friends blow theirs. In early 1939, he travelled to the Westerly, Rhode Island, home of Wilson E. "Bill" Burgess, W1BDS, at the request of Bill Halligan.

It had been announced that Burgess would be the recipient of the third annual William S. Paley Amateur Radio Award for "having made the outstanding contribution among radio amateurs to the American people during the past year." More specifically, the award recognized Burgess' efforts during the destructive hurricane that hit New England in September 1938. Halligan had learned, perhaps from Clinton DeSoto's article and photographs in the November, 1939, issue of *QST*, that Burgess' receiver was a Hallicrafters model.

From Chicago, Halligan called McElroy and asked him if he would pay Burgess a visit. In the spring of 1939, McElroy and a photographer arrived at station W1BDS.

While the photographer took pictures, Ted and Bill talked. As a result of the visit, Burgess agreed to loan Halligan his SX-16 receiver for display at the 1939 National Radio Show in Chicago. Undoubtedly influencing Burgess' decision was Halligan's offer of a new receiver for the loan of his old one. McElroy, never missing an opportunity to make a gift of a key or to gain a public relations advantage, removed a Mac-Key and a chrome-plated straight key from a paper bag and gave them to Burgess. Formal poses were assumed for the photographer, with McElroy and Burgess shaking hands.

McElroy struck Burgess as "a typical Boston Irishman. He didn't look very impressive.... He was short, and sort of a pudgy looking fellow." But when it came to copying fast code, Ted impressed everyone. "I talked to Ted a long time about that," Burgess said. Ted's code memory, he learned, was like "a tape running in his mind." It was a tape that would play for McElroy later that year in Asheville.

In the summer of 1939, the Asheville Amateur Radio Club hosted the "Carolina Floating Club" meet. Such consolidated meetings of several area amateur radio clubs were held about four times a year. Since the time of the meet was the anniversary of a hamfest hosted the previous year by the Asheville club, it was decided that the floating club meeting for July 1939 would again be a full-blown hamfest. Space at the George Vanderbilt hotel was secured for July 2, invitations were sent out, and arrangements were made for "the South's greatest code contest."

The meet, attended by 319 persons, opened with welcoming addresses by Holmes Bryson, the mayor of the city, and John Whisnant, president of the radio club. Several people gave talks, including ARRL Roanoke Division Director Hugh Caveness, W4DW; ARRL Section Communications Manager W.J. Wortman, W4CYB; Ted McElroy, now sporting amateur call W1JYN; and Levon R. McDonald, W8CW.

Going in to the Class A event, McElroy might have known it wouldn't be an easy match. He held the professional receiving title, and the world record speed. But competition would be stiff, especially from L.R. McDonald. McDonald, an engineer with AT&T, had won the Central Division ARRL Convention contest in Detroit at a speed of 60 words per minute in 1937. That gave him the amateur receiving title, and he had had two years to improve for the Asheville test. Walter H. Candler, the well-known mail-order code instructor who claimed both top contestants as his pupils, had assumed the duty of arranging the contest.

There was a bit of confusion before the contest could get under way. Two of the judges, Earl Gluck, W4CQ, and Hugh Caveness were present, but the third judge, Gene Turney, W2APT, hadn't arrived. There was some concern that, as Turney had to travel from Long Island, he wouldn't show up in time, so "Buck" Wortman, W4CYB, was designated to take Turney's place as a judge. Then, just before the contest was about to start, Turney appeared.

The contest tape had been prepared by the FCC Field Office in Boston, and guarded by two of the Club members; now it is unsealed. R.M. Gibbs, W4HX, of Asheville, threads it thorough the Wheatstone keyer and runs a few inches off. The half-dozen contestants adjust their headphones. Gibbs glances at his stop watch, says "ready", pulls a switch and the Class A contest begins. M.C. Barton, W4CRV, of Asheville, and two or three others wait about five seconds, then start typing. McDonald and McElroy wait about fifteen seconds, then they too start typing. Spectator James Harrison, W4FSE, of Asheville, described it this way:

> [At 50 wpm] I take up a set of phones and listen. Occasionally I interpret a "the" or an "and," but for the most part it sounds like ICW pouring through in a kaleidoscopic wave, beautiful to the ear but a conglomeration of QRN [static] to my mental ken.
>
> The machine increases to a speed of 55 wpm and three contestants sigh and drop out while a fourth, W4CRV, slackens the speed of his typing, then, as if pushed on by the momentum of his 50 wpm copying, whirls his fingers over the keys in one final, furious sortie, listens intently for the space of half a score of heartbeats and reluctantly takes off his fones. All the while, McElroy and McDonald, the two remaining contestants, seem to be copying effortlessly.
>
> Once more the machine increases its speed, this time to 60

wpm. The two contestants increase the tempo of their typing. Their moving fingers seem to be tapping a symphony in four hands. There are gasps from the gallery, then silence, eloquent with amazement and praise. Another adjustment by the operator at the machine and the speed is increased to 65 wpm, approaching the world's record. No sooner do the contestants adjust their copying to the new speed than it is moved on to 70 wpm. Both contestants are still copying furiously. McDonald, bulldog-like, is frowning intently; less phlegmatically do his fingers fly over the keyboard of his "mill." Neither contestant gives any intimation by glance or grimace that he knows he has broken the former record.

Walter Candler, meanwhile, hovered in the background. He gave encouragement to neither contestant. He seemed to spectator Harrison "to be in a world apart, far removed from the scene of this event." But at this point, Candler couldn't lose: Whoever won, Candler would claim the credit for training him.

> At 75 wpm there is a noticeable discord in the blending of the sounds from the two typewriters. Is there an ebbing in the receiving ability of one of these champions? A glance of the eye reveals that McDonald is losing his timing but that McElroy, with an almost imperceptible pause, as if to adjust his typing speed to that of his opponent, once more gathers momentum and makes a rhythm of his own typing. The clatter of the "mills" now sounds like music in two keys instead of the even tempo of a moment before.
>
> The speed of the machine moves up a step, approaching 80 wpm. McDonald gradually brings the movements of his fingers to a stop, rises, removes his fones and by a gesture, concedes victory to his opponent. But the machine does not stop, neither does McElroy. And the fingers, which a moment or so since were literally flying over the keyboard, seem to have now lost their magic. There is an occasional desultory click, then one stacatto sweep as if he were translating one familiar passage and the sound from his "mill" becomes piano, then pianissimo, gradually ceasing altogether.
>
> ...W4HX stops the machine, the full import of the occasion dawns upon the gallery and there is an almost deafening volume of applause. A new world's record in receiving code has been established.
>
> McElroy's achievement, based on the 24 Dot Word reception, is 75.2 WPM. He bears his badge with credit, and McDonald, who is, of course, disappointed, can know that he acquitted himself commendably. His is no mean achievement.

Since Buck Wortman hadn't been relieved of his duties when judge Gene Turney appeared, there were four judges for the event. But the outcome was not in doubt: Both

contestants had shattered the previous world record. And McElroy had won a close contest.

Harrison wrote up his observations for the August issue of the Radio Club's newsletter as the "true story" of the event. A year after the contest, McDonald would look back on it with a "sour grapes" attitude, perhaps because his recollection of the speed he attained differed from the official version:

> We both copied solid at 75 w.p.m. (press matter prepared by the F.C.C.) but they sent us some stuff at 77½ w.p.m. and I didn't get a good start on in [sic]. McElroy made something that looked like copy, but pretty ragged looking, so they gave him 75.2 I guess it was. If only first class copy had been counted it would have ended in a tie.

One wonders how a code receiving contest could have ended in a tie; either the speed would have been backed off until one contestant could make adequate copy, or increased until one bettered the other, so that a winner could be declared. But how, McDonald seemed to gripe, could McElroy could have been better than he? After all, "McElroy and I have had about the same telegraph experience."

The Asheville hamfest ended with a banquet that evening. Awards were distributed to the winners of the code competitions, including a trophy to little 14-year old Jean Hudson, W3BAK, who had taken Class B honors. McDonald had to be satisfied with second place honors in Class A, and could only watch as McElroy accepted the winner's trophy.

The Asheville test was the last official world code receiving championship ever held. Ted McElroy, the telegrapher who valued accuracy and held speed in contempt, had set a speed record that has never been broken.

Asheville, North Carolina, July 2 1939

RADIO TELEGRAPH APPARATUS *Manufactured by*

WORLD'S CHAMPION RADIO TELEGRAPHER

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SUPER
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S-600-PC *Platinum Contacts* $11.85
S-600-SC *Silver Contacts* 9.50

Into this gorgeous speed key has gone Mac's 30 years operating experience supplemented by the finest engineering ability in the radio-telegraph industry . . . with their combined efforts coordinated under the styling genius of one of America's outstanding design artists. See it! Handle it! You'll have to own it! Combining beauty and utility in a most striking fashion, this radically new, semi-automatic key is the last word in operating ease. Fast, rhythmical Morse is a real pleasure with this key.

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- Heavily chromed with bluish tinge to prevent glare.
- Stainless steel coil springs and bearings.
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- Bronze bearing screws.
- Bronze alloy pigtail.
- Bakelite insulation throughout.
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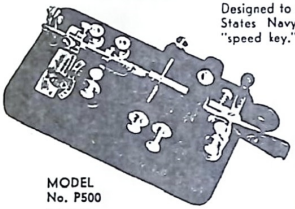
PROFESSIONAL MODEL, MAC KEY



MODEL
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$7.50
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Designed to conform with United States Navy specifications for "speed key." It is just what its name implies: A fine Professional Operator's model Mac Key. Base 3¾" x 6½" x ¾" thickness. Beautifully black wrinkled over Parkerized base casting. Carefully designed super-structure, similarly finished. Chromed parts, circuit closer, bakelite insulation, 3/16" silver contacts. A key that will thrill any radio or telegraph operator.

AMATEUR MODEL, SPEED KEY, A-400 @ $5.95

A genuine commercial or amateur radio operators speed key of such quality that you'll find it difficult to realize the price is so low.

DELUXE MODEL, STREAMKEY

No. 300
at $2.85 net.
No. 200
at $1.80 net.
No. 100
at $1.00 net.

Beautiful tear-drop streamlined base with heavy bluish tinged chrome. All parts chromed. Finely balanced key lever. 3/16" contacts, designed expressly for these keys. These pretty Streamkeys have a "feel" that makes good Morse easy for any operator. BB-300, ball bearing balanced lever; BS-300, bronze bearing screws. Same price.

PROFESSIONAL MODEL, same key but base "black wrinkled." BB-200 or BS-200 same price.

AMATEUR MODEL, nearly the same key, that is, using same lever and contacts. Pretty plastic base, cadmium parts. Bronze bearing screws. Stock depleted and deliveries stop January. S-100 will replace this 100.

NEW, "METALLIZED" "SUPER PLASTIC" S-100 @ $1.35 JANUARY DELIVERY.

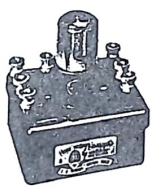
AC-DC AUDIO OSCILLATOR

MODEL No. A-700
Net to Operator $2.85
Minus Tube
Uses 117N7GT

An oscillator fully as good as my amazingly good Oscillatone, except smaller housing because no speaker. Electronically keyed which means limitless speed and clean keying. Uses 110 to 120 volts, either AC or DC. Connect jumper wire across two rear terminals for speaker volume. Terminals: 2 right for key; 2 left for headphones.

Battery Powered AUDIO OSCILLATOR

MODEL No. B-700
Net to Operator $1.80
Minus Tube & Batteries
Uses 1Q5GT



Same pretty plastic cabinet as Model A-700. A remarkably good audio oscillator giving a beautiful clear 1000 cycle note. Uses 1½ volt for A battery and 22½ volts or 45 volts B battery depending upon volume desired. Terminals: 2 right for key; 2 left for phones or speaker. Rear terminals, left to right: B plus, B minus; A plus, A minus.

T. R. McElroy

MAC

100 BROOKLINE AVENUE BOSTON, MASS.

CHAPTER 6

Whose Fire Is This, Anyway?

1940 - 1943

The loft at Congress Street rapidly became too cramped as McElroy added products, employees and a growing customer base. At the end of the decade he moved into larger quarters at 100-102 Brookline Avenue, near Fenway Park. Here, he had 20,000 square feet of workspace which he would soon staff with 50 workers. Meanwhile, he moved his family from Boston to the adjacent suburb of Milton. Jackie, who had completed a year at Boston English High School, entered Milton High.

Change extended to McElroy's product line as well. He designed two new telegraph keys to replace the six year old T-bar design bug. His P-500 "professional model" more closely resembled the competition—Vibroplex of New York, Les Logan of San Francisco—with its flat base and screwed-on pivot frame. But it was the "Super Stream-speed" for which he would be remembered by key collectors. Every part was chrome-plated. Especially notable was the unusual, flat teardrop-shaped base. The frame carried only the lever pivot. It was elegant.

The Super Stream-speed was the bug which McElroy implied he'd never make. Two years earlier he had written, "I know as an operator of about 25 years experience that it is very poor practice to have a chrome or nickel plated base on a key. Light reflection from such a base is a severe strain on an operator's eyes." His customers may have overlooked the chrome-based straight key he offered shortly after that statement, but they couldn't miss the glamorous Super Stream-speed.

McElroy downplayed the effect of the plating on the bug by stating that his chrome had a "bluish tinge to prevent glare," but it would be rumored that this was just his explanation for what was actually faulty plating on his first batch of Stream-speeds.

For the thin-wallet crowd, McElroy created an "amateur model" cast-iron speed key that he offered at a fire-sale price, explaining it was possible because he had "written off all original production costs...resulting from tremendous volume on the old style Standard and Deluxe Mac Key over the past five years. Nearly ten thousand of these excellent speed keys have been sold."

Morse equipment included a radio telegraph signal recorder and automatic transmitter, the Mac auto, a tape puller and a Mac recorder. McElroy had begun to package his equipment into complete systems, such as his "government school units" for classroom teaching of code sending and receiving.

Increasing sales and an expanding product line required money—and obtaining even a small loan often required imagination. One time, a loan of a couple hundred dollars came from McElroy's friends at Radio Shack. Ted's only collateral was his inventory, so he left a wooden crate filled with shiny, chrome-plated key bases with his friends.

Later, when Ted paid the loan off, he said, "I might as well tell you, the box contains rough castings from the foundry, not finished keys." Only the top layer of bases in the box were finished. No harm was done, but his friends were glad to have their money repaid.

McElroy's stay at 100 Brookline Avenue didn't last long. Within a year, he had an opportunity to move down the street to the corner of Jersey Street. Here, at 82 Brookline Avenue, the corner of the building offered a facade on which McElroy would emblazon his name and logo. Soon, more than a hundred workers would make use of the 50,000 square feet of floor space.

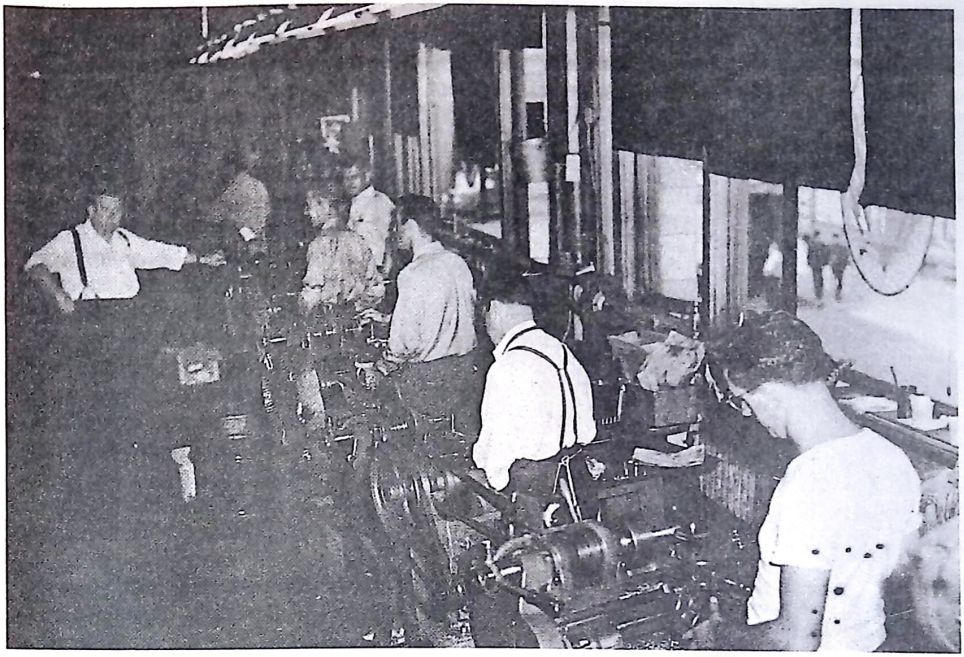
One of the new hires was young John Cannava, two years out of high school. On a whim, he stopped in at the plant. He was met at the door by Ralph Sullivan. Then Ted McElroy, this "big, fat, chunky guy," appeared.

82 Brookline Avenue, Boston. (From 1943 Handbook *ad.)*

"What the hell do you want?" said Ted. Cannava said he was looking for work. Without learning what Cannava could do, Ted said he could start immediately. Cannava suggested that he start the next day, Ted agreed, and the new hire left. McElroy hadn't even asked his name.

The next day, when McElroy learned the young man's name, he groaned, "For Christ's sake, another John. We'll call you Joe." Four Johns in his company were too many for McElroy.

The growth of the company was having effects in other areas. From the start of business in his home at 23 Bayside Street through the latest move to Brookline Avenue, "T.R. McElroy," the company, had been a sole proprietorship. But now income approached a million dollars. Toward the end of 1941, McElroy decided to formalize the business, to give it an existence apart from his own. He incorporated.



Machine shop, 82 Brookline Avenue. Ted on left.

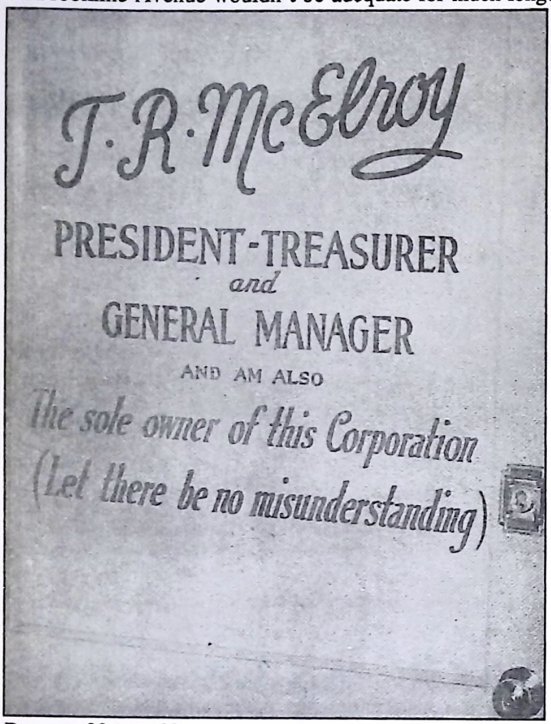
One reason for doing this may have been McElroy's increasing interest in military contracts. It's questionable whether the government would have granted large awards to a private individual (a proprietorship), in contrasted to a legal entity that potentially had a perpetual existence (a corporation). McElroy's personal reasons for incorporating may have concerned Jackie McElroy, his only son and heir. Certainly it would be easier to pass on the reins of ownership of a corporation than of a proprietorship. Jackie had attained his fifteenth birthday just a week before the incorporation papers were signed by his father. And as Ted would often tell his son, "Someday, Jackie, this'll all be yours."

On December 3, 1941, the McElroy Manufacturing Corporation was born. McElroy wasn't listed as an officer or even as a director of the company; he held a more important position. He was the sole stockholder.

Seven years earlier, shortly after starting to make keys, McElroy had recalled his stint at Camp Devens during WWI. He surmised that such a conflict would be good for his business. "All I need now is another good war to sell some of my own telegraph keys!" he had said. Four days after incorporating his company, McElroy's words would seem prophetic.

Business, in the form of government contract awards principally from the Signal Corps,

shot up dramatically. He was still producing telegraph keys and oscillators for radio amateurs, but military contracts produced more and more of his income. Ink-slip tape equipment, recorders, transmitters and tape pullers were the big-ticket items as the Army and Navy struggled to train thousands of students in the mystery of Morse. It must have seemed that even the new facilities on Brookline Avenue wouldn't be adequate for much longer.



Door at 82 Brookline Ave. As the only stockholder, Ted could give himself any title he wanted.

One of the products that took a disproportionate amount of space to produce was the inked-slip code practice tapes. Dozens of paper tapes had to be stretched out on long tables to be wound onto reels. Even at 82 Brookline Avenue, he felt a need for more room. About this time, the Army got into a controversy with McElroy about the origin of the inked-slip phototube keyer. At the core of the debate was the military's need for more equipment than McElroy could produce. Later, McElroy could look back with pride and say, "I was the actual inventor (yes, the Army admitted it) of the phototube keyer.... The thing got beyond anything I could make, I was...a small contractor. Among others, Espey Mfg Co of New York produced many thousands of them."

World War II affected Ted and his brothers in different ways. Jack had been a Naval Reserve Officer since 1929; he would spend WWII at sea. Eventually he would rise to the rank of Rear Admiral. Howard had been a radio operator on a trawler out of Gloucester, Mass., then had worked at WSL at Southampton, Long Island. Wartime found him on Gallops Island in Boston Harbor where he was a radio instructor at the U.S. Maritime Service Radio School.

Brother Paul was a free spirit. Described as "a character" and "tough" by family members and others who knew him, he was sometimes considered the black sheep of the family. Like Howard, "PJ" worked at WSL before the war. His manner of leaving that job describes his personality: One day after his 8 AM shift had started, WSL received a radio message—it was from PJ. "QTO New York," it said. "Bound for Europe." Maritime operators will understand the Q signal: "I have left dock." He was already aboard ship, heading out. During the war, Paul

was a radio operator in the Merchant Marine.

Ted, meanwhile, was landlocked at Brookline Avenue. He knew what his brothers were doing, and going through, as the war raged. Howard would often visit Ted at the plant, stirring up memories of earlier days in the Merchant Marine service. Ted longed to return to the sea, but his contribution to the war effort was being made in the shadow of Fenway Park.

McElroy's friend Reg Adams left Webb's, in London, to make his wartime contribution in 1942. He joined "at their request because of his radio expertise" Britain's wartime sabotage organization, the Special Operations Executive. The SOE secretly trained and equipped agents, and placed them in enemy territory to stimulate the resistance.

Left to Right Reg Adams, one of Britain's greatest war heroes. Parachuted into Poland many times and transmitted intelligence via McElroy high speed apparatus. Decorated also by Polish Government in exile. Frank Bersody, top U. S. civilian on communication matters, Washington. Radio operator with Ted McElroy.

Adams' work for the SOE was important, and dangerous as well. McElroy believed that his friend was "Parachuted into Poland many times" during the war; as far as Adams' wife, Hazel, is aware, Reg was dropped into Poland on at least two occasions. It was, of course, the kind of top-secret operation that could not be discussed freely. Perhaps because of this, Adams' exploits evolved into legend. In the book, *The Killing of Reinhard Heydrich*, Callum MacDonald says that "precious communications equipment...was installed by SIS in Rosendale Road, West Dulwich, where it operated under the cover of a radio shop run by a British agent named Reg Adams..." which was later "bombed out [by a] stick of high explosives...." The facts and the legends made Adams "one of Britain's greatest war heros" in McElroy's eyes. And Ted was doubtless not alone in his estimation of his friend.

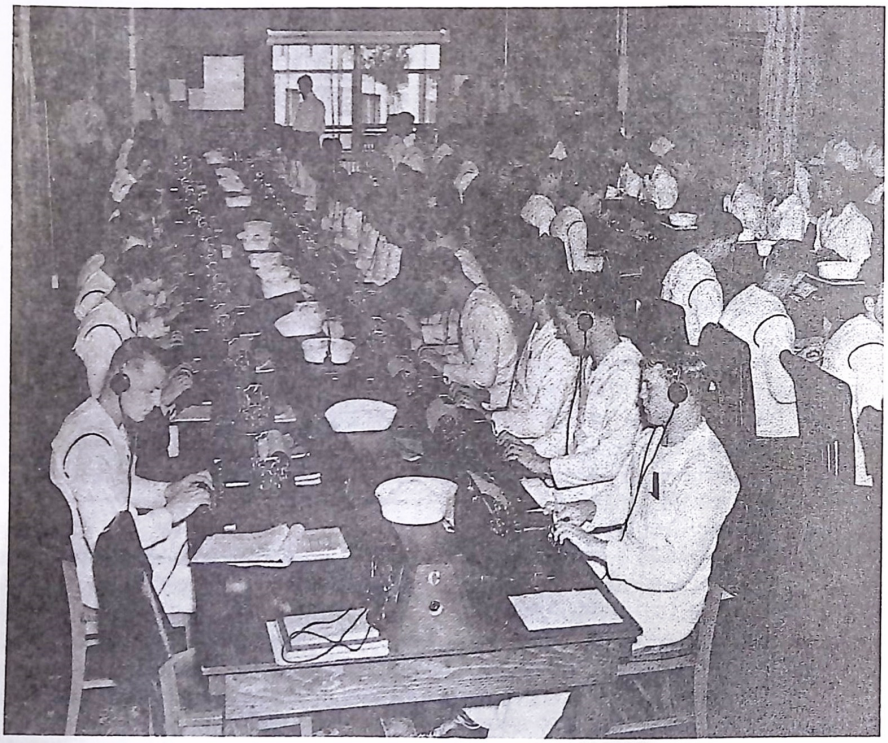
Since the beginning of the war, McElroy "realized that there was a possibility that East Coast cities such as Boston, might be subjected to attack either by air, or by small aircraft from submarines or by some token shelling from submarines." He was also concerned that his company could be a specific target, since "I also knew that there were only two sources of supply for high speed wireless telegraph apparatus here in this country." He looked further inland for a more secure facility, which would also relieve the pressure on the Brookline Avenue plant.

In 1942 he found what he wanted. Robert Abbott, a resident of California, owned a substantial amount of land in the town of Littleton, about twenty miles west of Boston. Abbott was willing to sell some of it; McElroy was eager to buy. They closed the deal in October, and Ted McElroy owned Fort Hill Farm, a 22-acre tract with a farmhouse on the northerly side of

Newtown Road. He also owned 56 acres across the street, a parcel that ran four-tenths of a mile down to Fort Pond. On the shore of the pond (which at least one writer—undoubtedly with a nudge from Ted—would call McElroy Lake) was a large, solid cottage and "a large number of very fine buildings."

The farmhouse quickly became a repository for inventory which overflowed out of Brookline Avenue. Down by the pond, McElroy remodeled a large dairy barn to prepare it for making practice tapes. A horse stable and a seven-car garage were converted into a box shop for making the shipping containers for the equipment produced in Boston. McElroy, the owner of the facilities, rented them to his corporation for $100 per month.

Busy manufacturing high-speed code equipment, McElroy either forgot about the danger of German submarines in Boston Harbor, or realized he had overestimated the threat. Brookline Avenue continued to hum with activity.



A few of Ted McElroy's customers. (Official U.S. Navy Photograph)

Stories of the unusual way McElroy ran his company and treated his employees were legion, and contributed to legends that grew up around him. Many of these were the result of misunderstandings which, if he didn't actually foster, McElroy would allow to proliferate. One involved the many jukeboxes he placed about his Boston plant so (the story went) his employees could enjoy their selection of music as they worked.

The truth was both more mundane and canny. McElroy had purchased "more than 1,000" jukeboxes early in the war. The employees were able to play the jukeboxes as they worked, but only while the jukeboxes worked. Because the 'boxes were slowly but surely being stripped of their motors, which were used in the automatic code equipment the company manufactured.

Early in the war, McElroy had realized that a shortage of electric motors would be likely. To cover his future requirements, he bought a warehouse full of jukeboxes. Later, when other military contract bidders had to either build their own motors or contract that work out, McElroy would simply scavenge his jukeboxes.

In order to use this scheme, McElroy included two requirements in his bids: His motors were to be considered satisfactory, and they would not require strict documentation. The Signal Corps agreed, and McElroy often underbid others for the contracts. Both parties apparently ignored the problem a burned-out motor would create, for rarely were any two motors alike.

The spreading lack of music in the plant as the jukeboxes were cannibalized had an interesting side-effect; it led McElroy to organize a ten-man orchestra of employees. The orchestra would entertain at company parties, and provide the music at more formal company events.

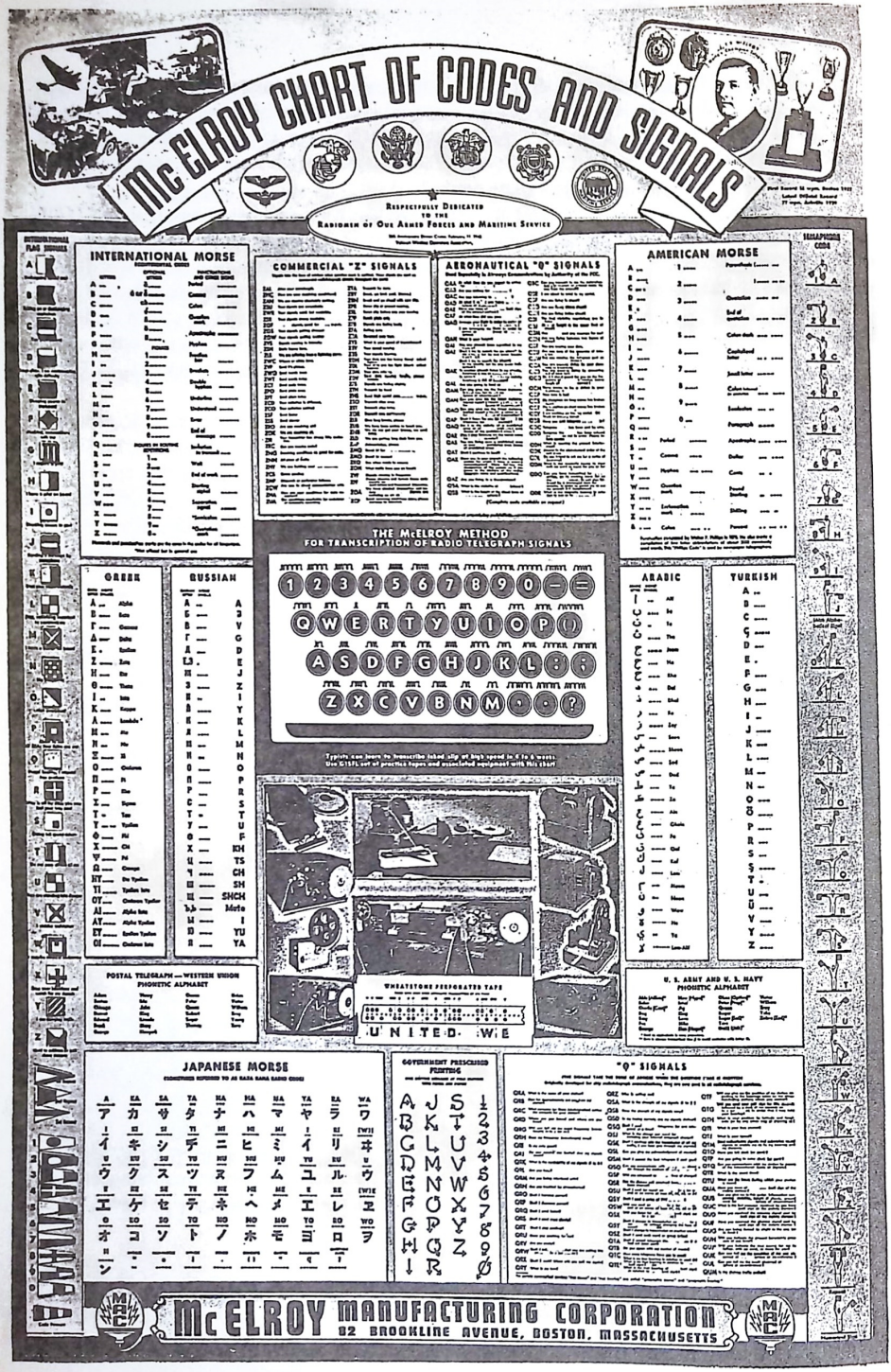
Contributing to the stories of McElroy's idiosyncracies was his penchant for giving his workers nicknames. There were Bennie the Bum (Benjamin Halpin) and the Rabbi (Joe Marzic). "Joe" Cannava became Conniving Joe, and John Rhilinger was "Johnny Ringleader." There was Patsy Zombie (Wanda Ziemba), whose husband Frank didn't even work there but who, since he was married to "Pat," was dubbed "Mike" to complete the popular team of Pat and Mike. Another team was Dilly and Dally (Irene Kaszuba and Katherine Taschioglou). And there was The Coffee Girl.

Ted had hired a woman for $40 a week to make coffee. That was the total of her duties: To make coffee. She was "The Coffee Girl." Her equipment was on the second floor, under a stairwell. There she's prepare the coffee, load several cups onto a tray, and set out to deliver it.

The second floor was also where McElroy enjoyed driving up and down the aisles in his Crosley. This small, two-cylinder automobile may first have caught McElroy's fancy when it was introduced at the New York World's Fair in 1939 by Powel Crosley, Jr. Eventually, a couple of them were in regular use at McElroy's shop.

One day the Crosley, with Ted at the wheel, and the coffee girl, her arms burdened with a freshly set tray, chanced to meet, with unfortunate results to the coffee girl's leg. She sued. He refused the outrageous claim. It went to court. In the end it was worked out, but not before one judge was totally confused by a lawsuit that seemed to claim a woman was struck by a car on the second floor of a building at 82 Brookline Avenue.

Despite his growing business, McElroy would always take time off to get together with friends and fellow telegraphers. An enjoyable annual diversion was attending the annual banquet, or "Dinner-Cruise," of the Veteran Wireless Operators Association at the Hotel Astor in New York.


McELROY CHART OF CODES AND SIGNALS
Respectfully Dedicated to the Radiomen of Our Armed Forces and Maritime Service
INTERNATIONAL MORSE
COMMERCIAL "Z" SIGNALS
AERONAUTICAL "Q" SIGNALS
AMERICAN MORSE
SEMAPHORE CODE
THE McELROY METHOD FOR TRANSCRIPTION OF RADIO TELEGRAPH SIGNALS
GREEK
RUSSIAN
ARABIC
TURKISH
POSTAL TELEGRAPH — WESTERN UNION PHONETIC ALPHABET
U. S. ARMY AND U. S. NAVY PHONETIC ALPHABET
WHEATSTONE PERFORATED TAPE
UNITED WE
JAPANESE MORSE
GOVERNMENT PRESCRIBED PUNCTUATION
"Q" SIGNALS
McELROY MANUFACTURING CORPORATION
92 BROOKLINE AVENUE, BOSTON, MASSACHUSETTS

A staple of the annual dinners was the presentation of "Marconi Memorial" scrolls, awards and plaques to those who had displayed significant achievement in various areas in the past year. At the April, 1942, ceremony, broadcast over the NBC radio network, McElroy was presented with the Marconi Memorial Award for Code Proficiency, "recognizing him as the undisputed World's Champion Radio Telegraphist." Ted took the opportunity to put on a demonstration of his unbeatable code-copying ability. This, too, was broadcast over the network.

For the 1943 "Cruise," McElroy had been working on a chart that would display several telegraphic codes together with some of his company's products as a promotional giveaway. He came up with an impressive design that contained codes in five languages plus Continental and American Morse, as well as Q signals, Z signals and other information. It was eye-catching and durable, printed in six colors on a linen backing measuring 25 inches wide and 38 inches long.

McElroy's design included the armed forces insignias, some of his awards, and his first and last speed records—which, as usual he got wrong. On February 11, 1943, he presented the now-famous "McElroy Chart of Codes and Signals" at the Dinner-Cruise. It was, said the Secretary of the VWOA, "the most complete and authoritative work of its kind that has ever been published." McElroy offered to "mail to members and their guests at the new York gathering a copy of this chart for their personal use, on request."

It was an immediate hit. McElroy used it in advertising, offering it "to any branch of the armed services of this country and our allied nations, to schools and government agencies ... at no charge." So heavy was the demand for the Chart, and so freely did McElroy dispense it, that he "gave away all over the world two lots of ten thousand each." He wasn't concerned with the cost of the Chart; "All guv'ment money so it didn't matter," he reasoned.

While the chart was good publicity for himself and his company, a public relations bonus came later in the year. In October, McElroy was notified by Robert Patterson, Undersecretary of War, that the Army-Navy Production Award, the so-called "E" award, had been earned by his workers. The award would technically be conferred upon the employees of his company, but the McElroy Manufacturing Corporation and Ted McElroy himself would reap its benefits in advertising and promotion.

Ted had his secretary, Katherine Dempsey, type up an appropriate response to the notification. In preparation for the official award ceremony to be held on November 8, technical writers John ("Death Valley") Degelman and Sam Cauman created a suitably elegant souvenir booklet to be given to each of the employees.

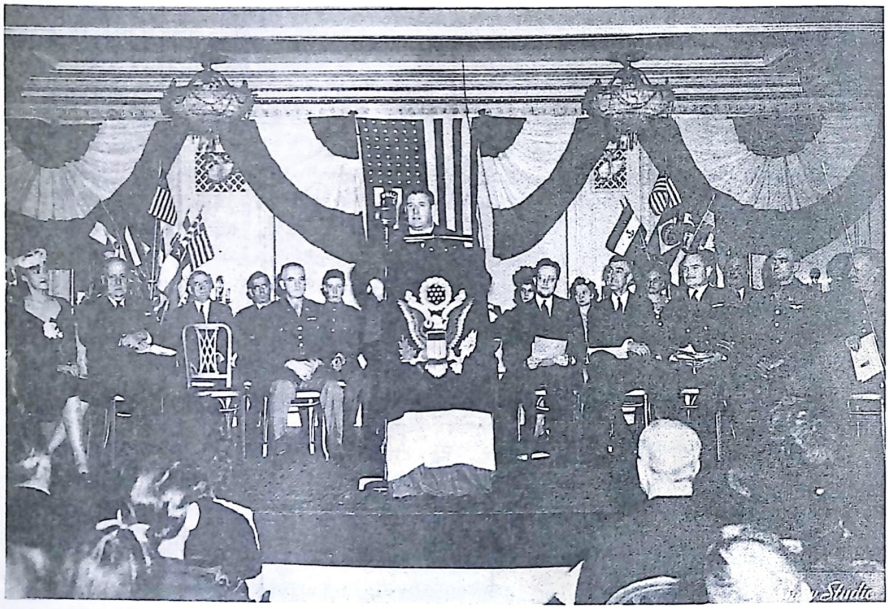
November 8, 1943, was a Monday. The ceremony, held in the Crystal Room of the Kenmore Hotel in Boston, was broadcast on radio over the Mutual Broadcasting System and carried locally by WNAC. In the audience were Ted's friends, including Bill Halligan, and his family, including his mother, Catherine. But Ted might have wished he had won the award a little sooner; his father had died four months earlier.

The broadcast started with musical selections by the Employee's Orchestra and the singing of "America" by soloist Jean Merrill. The announcer was Tom Slater. Addresses were given by both David I. Walsh, senior U.S. senator from Massachusetts and chairman of the Committee on Naval affairs, and Leverett Saltonstall, the Governor of Massachusetts. As usual in this type of ceremony, the dignitaries seemed to have no idea what Ted's company did, or was being recognized for. Governor Saltonstall said that the company was the "biggest manufacturer of

telegraphic keys in the country," and urged Ted to continue "inventing new types of keys."

The "E" award in the form of a large flag was presented by Colonel Kirk B. Lawton of the Army Signal Corps, and accepted on behalf of the employees by McElroy in a brief, two-minute speech. Nagler, in his article on McElroy, described it this way:

> ...it was thought wise to have a government official draw up a speech of acceptance for McElroy.
>
> Ted accepted gracefully that he read the speech drawn up, but at the moment he stepped forward to the microphone, he slowly tore the text of the speech into little pieces. Everybody present ducked for cover—but their fears were ungrounded. He delivered a simply worded, sincere and appropriate speech of acceptance. Its keynote was his humble thanks to his employees for their splendid contribution to the war effort.



Ted gives his speech at the E-award ceremony.
Front row, seated: Jean Merrill, soloist; Senator David Walsh; Col. Kirk Lawton; Tom Slater, announcer; Governor Leverett Saltonstall; Lt. Comm. James Morgan; Sgt. Edwin Armstrong; Col. LeBrun. (Jack McElroy is seated at the back, between Ted and Col. Lawton.)

Ted and Jack McElroy display the E-award flag at the ceremony on November 8, 1943, held at the Kenmore Hotel in Boston.

In addition to the souvenir programs received by the employees, they were each given an "E" award lapel pin. The presentation of the pins was made by Lt. Commander James F. Morgan, U.S.N.R.; John Contini, Ted's first employee, made the acceptance speech on behalf of the employees. Then Miss Merrill sang the "Star Spangled Banner," and the program was over. Everyone went back to the plant at 82 Brookline Avenue to celebrate. McElroy had a new advertising symbol—the winged "E"—which he'd use for the duration of the war.

The year was almost over, and it looked like it would end on the high note of the awards ceremony. It had been a good year; McElroy's business had grossed $4,000,000. But just before Christmas, during the night of December 22, 1943, a fire tore through the Littleton box factory. The fire had "started in a small carpenter shop and spread rapidly to other small wooden buildings." When Ted rushed up to the fire in his own bright-red Model A Ford fire truck, he naturally tried to take charge.

> When he arrived, the local fire chief and constabulary would pay no attention to his suggestions for fighting the blaze. Standing off to one side while it consumed his factory, he scratched his head and shouted, "Say, whose fire is this, anyway?"

Because of the "severely cold weather conditions and a high wind, firemen made little headway in stopping the flames...." The fire burned for two days. McElroy called on Sam Cauman and told him to "get those books out and find out how we can build a new factory, fast."

"This isn't one for the books," Sam replied. "This is a job for hard work."

Pulling many of his employees out of Boston, McElroy wasted no time. Within a day the still-smoldering ruins were cleared. Four days later, a new factory was up and operating.

Well, not quite four days. That's the way Barney Nagler told the story in *Liberty* magazine, but in early 1945 McElroy would still be working on replacing, and even enlarging, the facilities he had lost in the fire. A sizable quonset hut proved easy to erect, and became the main building, but more was needed. Part of McElroy's plan involved tearing down the farmhouse on Newtown Road which "has been a white elephant on my hands ever since I bought it." He felt its clapboards, sheathing, wiring and plumbing fixtures could be incorporated into new buildings down on Fort Pond. Even then, when the corporation was grossing five million dollars a year, McElroy wouldn't pass up the opportunity to save a few dollars.

CHAPTER 7

I Got Itchier and Itchier

1944 - 1947

Meetings of the Veteran Wireless Operators Association continued to give Ted McElroy an opportunity and an excuse to meet his old friends in the business. Both McElroy and his old friend Bill Halligan were life members of the VWOA. McElroy would attend the annual Chicago Chapter dinner, where Halligan was Chapter Chairman. And they were both regulars at the annual New York "Dinner-Cruise" banquets held early each year at the Hotel Astor.

February, 1944, VWOA Dinner-Cruise. Life Member Ted McElroy is presented with a Marconi Medal of Achievement by President William J. McGonigle.

McElroy was, as usual, at the 1944 banquet. He was seated, as he had been for the past few years, at the head table. On this evening, he would be presented with another of the Marconi Memorial awards that the VWOA distributed every year. This year, the medal was given to four men including both McElroy and Bill Halligan. McElroy's Medal of Achievement was for having earned the Army-Navy "E". award.

McElroy didn't attend the Dinner-Cruise alone; he had brought a dozen of his employees with him. Not just any twelve, though. Al Pruneau, manager of McElroy's tape perforating department, was there as the conductor of the company orchestra; George Fischer, head draftsman, was there with his drums; Cecilia "Sissy" Smith, who ran the tape-pulling department, was there with her violin; and nine other worker-musicians who had travelled with McElroy to the Hotel Astor were there with their instruments.

For the band, getting there was half the fun. Ted had hired a train from Boston, and the trip was non-stop booze all the way. The band, a New York paper reported, was the hit of the dinner.

Meeting old friends at VWOA meets was not just an evening of amusement; the dinners served a business purpose as well. In addition to placing a business ad in the Yearbook, or distributing his Chart of Codes as he had done the previous year, the dinners allowed McElroy to meet informally with military men and the heads of industrial radio organizations. The 1944 dinner, for example, was attended by Ludwig Arnson, President of Radio Receptor Company, and by General Henry Arnold, Commanding General of the Army Air Corps. But the fun and entertainment would not be overlooked.

Another opportunity to combine business and pleasure absorbed McElroy at this time, word of which got out soon after the VWOA meet. He was involved in a plan to buy the Brooklyn Dodgers baseball team. Although he was famous among "radio fans," as amateur radio operators were apt to be called, and well known among the cognoscenti of telegraph apparatus, McElroy did not enjoy popular notoriety until word of his involvement in the purchase of the Dodgers became known. The plan—or was it a dream?—hit the streets of Boston on the afternoon of March 1, 1944. "Bostonian Bids for Dodgers," the headline read.

> NEW YORK, March 1 (UPI)—Ted McElroy, Boston millionaire manufacturer, and several associates today opened negotiations for the purchase of the $2,000,000 Brooklyn Dodger baseball team.
>
> McElroy was represented by an agent who disclosed that his associates are wealthy men who, like McElroy, are in the communications manufacturing field.
>
> It was indicated that if involved Dodger affairs could be straightened out the purchase price would not block the deal. Max Meyer, wealthy Brooklyn jeweler, gave up his attempt to buy the club recently because its affairs are so complex.
>
> Fifty percent of the club stock is held by the Charles H. Ebbets estate. Another 25 percent is owned by Mrs. James Mulvey, who intends retaining it. The remaining 25 percent which, like the Ebbets 50 percent, is for sale, is owned by heirs of the late Mrs. Ed McKeever.
>
> If McElroy and his associates are successful, they would

bring more color to the Dodgers than it had even in the hectic regime of Lt Col Larry MacPhail. For McElroy is known as the "Magnificent Screwball."

What little knowledge the public had of McElroy—knowledge of the "screwy" way he ran his company—made them nervous about how he would run the Dodgers. But it was rumored that Ted had some progressive ideas as an owner of "dem bums" from Brooklyn; television (this was 1944, remember) was said to play "an important part in his future plans."

There were other rumors. The buyers were McElroy "and a Chicago associate"; those inclined to guess named Bill Halligan. They were "willing to put up about $1,500,000 to get into baseball."

As anyone interested in baseball knows, the deal never went through, and the dream never materialized. Again, the rumor mill ground out the reason: The announcement was "prematurely mentioned in the journals, thus snuffing out the possibility."

In the mid-forties McElroy was still visited by the occasional amateur or commercial radio operator in need of a telegraph key, the one product he was no longer manufacturing. To satisfy these customers, and to have an appropriate telegraphic gift on hand to bestow on friends, he kept a cupboard stocked with Vibroplex bugs. While the price from the New York manufacturer for the Original model was $15.95, McElroy wasn't shy about asking twenty dollars for the popular bugs.

Larry Rossiter, Radio Operator aboard a Navy ship that had docked at Boston, walked into the factory at 82 Brookline Avenue one Saturday in 1944. Since it was the weekend, he wasn't surprised to find the shop empty except for Ted and Katherine Dempsey, his secretary. But—like most who met him for the first time—Rossiter was surprised by McElroy himself. "He was a bigger man than I expected," Rossiter later commented. And, having seen McElroy's picture in the Candler ads, he was surprised to see that he had "a shock of white hair."

Rossiter had been hoping to buy a McElroy bug, since he "had used one previously and liked it," but took the Vibroplex Ted offered for twenty dollars. And although he only had fifteen dollars on him, McElroy let him take it if he would send the rest on payday. Later, after he had sent the money, Rossiter received a letter from Ted. "In appreciation of your honesty and as a gesture of good-will," McElroy wrote, "I am returning the $5.00."

Rossiter found McElroy to be "very friendly and outgoing." Upon learning that his customer was from Canada, McElroy proposed that Rossiter smuggle fishing reels to the States and take back shoes on the return trip, as there was, Ted said, "a big price difference on these items and we could make some money!"

Rossiter was sure McElroy was joking, but Ted was probably just thinking back to the days during prohibition when, "like all telegraph operators", he "did a bit of smuggling when working vacation relief in small newspapers in towns near the Canadian border."

Larry Rossiter's reaction to meeting Ted was typical. McElroy was a heavy man and, since he stood only 5 feet 8 inches tall, his weight—225 pounds at this time—was noticeable. Most people, upon first meeting Ted, were impressed with his bulk, but the quality of the impression varied. One reporter described him as "a portly, middle-sized Irishman." Another called him "roly-poly" and, in a jocular vein, "famous, fat and 44." (This was six months before his 44th birthday, which the reporter knew, but alliteration demanded the number.) McElroy

himself was resigned to his weight. He tried dieting from time to time, to no avail. But he carried himself well.

Ted's size extended to his huge hands; his fingers were described as "sausage-like." Impressive as they might have been, they were more so when seen flying over a typewriter keyboard. The amazement then was no so much for their size, but that he could use them to actually pick out individual keys on the machine.

Rossiter had no trouble finding McElroy at his company in Boston, but the business on Brookline Avenue wasn't his only venture. He owned or was involved in several other companies at the time. One of these was Telegraph Apparatus Co., a partnership ("not inc." as the ads said) between McElroy and his friends Joe Goode and Frank Bascomb. Located in Chicago, TAC picked up the manufacture of telegraph keys where McElroy left off.

TAC's first bug (the CP-500/800), initially advertised in *QST* in January, 1944, used a copy of the McElroy P-500 base but had a frame and damper patterned after the Vibroplex design. Their second bug (the CP-510/810) used a large, slab-type base with a novel hole-in-the-wall style frame. Although they were advertised as "designed by the World's Champion Radio Telegrapher," McElroy's name was never mentioned in their ads. His involvement was no secret, however; Newark Electric Company offered the TAC model 810 under the bold head, "McElroy Key."

TAC also made teardrop-shaped hand keys (but didn't call them Streamkeys) and oscillators (which they called, as McElroy had, "Oscillatones"). Just as it had done with McElroy's company in Boston, the war provided TAC with opportunities. The company offered their Signal Corps J-37 and J-45 keys to the civilian market.

Another of McElroy's involvements was Radio Surplus Corp. Also located in Chicago, this one dealt, as the name indicates, in war surplus materiel. It, too, was owned by McElroy, Goode and Bascomb. An inquiry to Radio Surplus from a middleman in early 1947 demonstrates McElroy's unique approach in business matters.

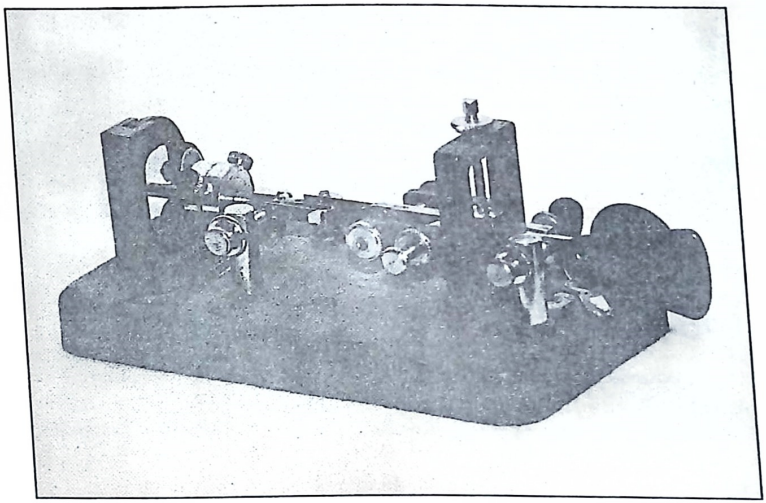
The request was for 300 surplus "Operator Position Chairs" that McElroy had previously manufactured. "I assume these are for Barker & Williamson...because they have asked me about the same thing," McElroy responded. He said that he didn't believe they would ever find them in surplus. He suggested that he could get new ones from a "thieving friend in Boston" to whom he had sold his chair-making equipment, but that if he handled the chairs as a business proposition, the best he could do would be to make a dollar each on them, "and I am not yet hard up enough to be interested in making a lousy buck each on 300 or 350 chairs. That aint even whiskey money to me."

After asking "why the hell doesn't B&W try to find someone in Philadelphia to make the chairs for them", he said he could "get them from our thieving friend" and deliver them at a markup of one dollar per chair, with the money to go to the driver "out of which no doubt he will buy me a few bottles of whiskey."

McElroy's overseas business interests continued to be active. By 1944, Reg Adams had risen to the rank of Major in the SOE, and was in charge of the Wireless Section of the Poland, Czechoslovakia and Hungary Groups. All that training and equipping of sabotage agents (over 9,000 of them in all) required a lot of radio apparatus.

The result was that the McElroy-Adams partnership flourished during the war. Adams,

assisted by McElroy, equipped the majority of Britain's SOE, MI6 and SIS (the Secret Intelligence Service) with American radio sets during the war. Each Saturday McElroy would ship "more than $100,000 worth of equipment from Boston to Liverpool."



Telegraph Apparatus Co. (not inc.) model CP-500.

In March, 1945, McElroy heard that his title as the world's fastest radio telegrapher had been challenged. An instructor in the Army's Central Signal Corps School, Cpl. James Ralph Graham, had claimed to have copied 79.4 words per minute for ten minutes in a demonstration. Graham "thinks he can beat McElroy, and wants to fight it out with the Boston man," it was reported.

As a seasoned Morse telegrapher, the Signal Corps instructor's background was similar to that of many of the high-speed Continental speed merchants. His experience with Continental had begun when he entered the Army just five months earlier. But the champion was having none of it. "I would be willing to take on that Army kid any time, any place," McElroy said, "provided there were official Army and Navy judges and timers."

> That unofficial score you tell me about doesn't mean anything. Why, before he was born, I was giving speed demonstrations. I never heard of him, but I guess I could show him up without too much trouble. But all these speed tournaments were called off on account of the war. I'm glad they were. There are a lot of screwball kids who think they're fast, and if I paid any attention to them, I'd have no time for business.

McElroy could have mentioned his own unofficial record of 83 words per minute set at

the New England Division convention in 1937. At the time, *QST* reported with an air of bored indifference that McElroy "gave another of his demonstrations and copied, unofficially, 82 words per minute." But for Graham's lesser feat, *QST* summarily characterized it, without qualification, as setting "A new speed record for reception of the International Morse code."

It made little difference. Like McElroy's 1937 demonstration, Graham's accomplishment was not done in official (and highly publicized) competition. Graham's record was ignored and he, like Joseph Smyth, was consigned to anonymity.

There was another reason McElroy wasn't interested in slugging it out over a keyboard with Graham: he was due to ship out as a radio operator on a merchant ship within a day or two. As the war in the Atlantic wound down in early 1945, Ted saw his chances for personal involvement slipping away. "All through this lousy war, while my boys and girls joined the Army and Navy and Marine Corps and Merchant Marine, I got itchier and itchier. Too old (so "they" said) for the Army and Navy, I finally was lucky enough to get back into harness as a seagoing radio operator."

He spoke of the shortage of radio operators, and how he wanted to be able to fill in. And always the showman, he came up with a quote that would be repeated in several articles: "It's to get away from this dump," he said. Although, he also admitted, "It will be a rest as much as anything."

In late March, he took his oath and picked up his Merchant Seaman's Certificate of Identification and his Certificate of Service with his rating of Radio Operator. Two days later, leaving Frank Bascomb to run the factory, McElroy was assigned to a relief trip aboard the SS Berwind Vale, of the Willmore Line.

It was reported that McElroy "shipped out in the merchant marine as a lieutenant, senior grade, USMS." He was just in time. The war in the Atlantic continued for five more weeks; the last merchant ship to be torpedoed by the Germans was the collier Black Point, hit off of Block Island on May 6.

That fall, McElroy accepted another assignment, this one to the SS Benjamin Huntington, of the Lykes Bros line, making a run to England. Travelling to England aboard a Liberty ship, a welded-seam cargo vessel capable of 11 knots on a good day, wasn't travelling in style, but it suited McElroy. And once the crew found out who the "pot bellied old guy" was, he was a celebrity. They "learned that he sailed during the war because he wanted to see what it was all about." (To which a young crewman responded, "He shouldda been with us, eh?")

Upon arrival in England, he paid a surprise visit to Reg Adams and his wife, Hazel. With the freedom of travel reestablished by the end of the war, his friends returned the favor by visiting the United States the following year. "We spent some very happy times with [Ted] in the States and here in England," Mrs. Adams would later recall.

War's end also meant a change in business patterns. The termination of hostilities suggested an end to McElroy's sales of Wheatstone code equipment to the secret services in England; the termination of Lend-Lease assured it. Hallicrafters equipment could be sold in the civilian market, so McElroy applied himself to promoting Bill Halligan's radios to amateurs. He would continue to manufacture the equipment that had made him wealthy during the war, but he no longer needed the Boston facility. The Littleton location offered a bucolic setting with sufficient space and unlimited possibilities.

Ted and some of the gang at 82 Brookline Avenue, March 1945.
L-R: John Schroeder, engineer; Rose Addonizio, assembler;
Irene Kaszuba, stenographer; Ted McElroy; Esther Rowan, solderer;
John Contini, shop superintendent; and Bill Diamond, maintenance.

On June 11, 1947, the location of the principal offices of McElroy Manufacturing Corporation was officially changed from Boston to Littleton. By the end of the following year, the plant in the shadow of Fenway Park had been vacated.

With the changes in his product line brought about by concentrating on military contracts, McElroy found that he had little to offer dealers who sold to radio amateurs. He continued to bid on military contracts, and also sought to sell his tape equipment directly to the public. Each set of customers brought their own problems. Selling to the military meant scheduling and pricing problems. Retailing to the general public often meant dealing with peculiar customers. And Ted McElroy didn't suffer fools gladly.

One day in the summer of 1947 McElroy received an inquiry from a fellow in New York

who, desiring to become a radio operator, asked him about the price of his ink-slip code practice tapes. Ted probably sent a typically long, rambling explanation of the thousands of sets he sold to the Signal Corps and why his price of forty-five dollars for a fifteen-roll set was such a bargain. For some reason, this elicited a nasty reply from the prospective student. He called McElroy a "profiteer who cannot even write an intelligent business letter". He accused him of placing "the dollar above any consideration whatsoever" and of "blocking a student's way to his goal."

Baffled by this invective, McElroy responded, even though "I suppose I should not even bother to reply." He carefully reviewed his quote, and said, "For the life of me I cannot find anything in the correspondence that gives you the right to write the stupid letter you sent me on August 4'th." Building up steam, he called his correspondent's letter "poorly written" and "showing a decided lack of spelling ability." It was, Ted concluded, "a hopeless mess."

"As a matter of fact," McElroy continued, "I think you would be wasting your money to buy a set." If the man took the government radio operator test, "you will have to write it out and I doubt you have enough education to do that." McElroy ended with a suggestion: "So why dont you just forget about practice tapes and go to a job for which I am sure you are well fitted: digging sewers or cleaning cesspools."

Ted McElroy and Bill Halligan, 1945.

Late in 1947 an event occurred that was as far removed from the environs of Boston and Littleton as one could hope to get, and yet Ted McElroy—or at least his name and equipment—was involved. On November 21, Commander Finn Ronne, U.S.N.R., leader of the Ronne Antarctic Research Expedition, was in a Beechcraft flying southward over the eastern coast of the Antarctic Peninsula. Glaciers and mountains passed below. To the east were the bays and inlets to the Weddell Sea. Ronne later reported:

> As we flew on, whole groups of mountains came into view, new mountains never before plotted on any map, never seen by humans before. I named them: Sweeney Mountains,...Mount Horne, Mount Hassage. Yes, I was naming ranges and mountains and glaciers in honor of members of my expedition and friends who had helped me with money and equipment to get the expedition together.

One of those mountains he named Mount McElroy, in gratitude for Ted's help to the expedition. McElroy's involvement began ten months earlier with a letter. Ronne's ship and aircraft were on loan from the U.S. government, but the expedition members had to beg, borrow and scrounge the tons of other material, equipment and supplies they would need.

Twenty-year old student Lawrence Kelsey had been accepted as the radio operator for the expedition. He had several year's experience in the U.S. Merchant Service as a Ship's Radio Officer; what he didn't have was automatic telegraph equipment. He was appalled at the thought of having to transmit by hand the expected crush of press traffic, scientific notes and personal messages from the Antarctic.

Kelsey had heard of Ted McElroy, of his reputation as world's champion telegrapher and of his automatic Morse equipment. He sent McElroy a letter explaining the situation.

> Ted's reply was almost instantaneous and very positive and helpful....Ted very kindly offered to supply everything needed for telegraphic automatic transmission...except that I was supposed to borrow a Kleinschmidt perforator from some source or other....
>
> I reported my lack of success to Ted and time and events continued to press upon me, and I left Washington, DC for Beaumont, Tx. [where the ship was being readied] to begin work on the radio installation....

McElroy saw in the letter an opportunity to perform a good deed, gain good will for his company and, not incidentally, obtain publicity for his equipment. From his office at Littleton he announced to the press his intentions to "supervise installation of his special radio apparatus on board the 'Port of Beaumont, Texas' and instruct the vessel's radio operators in its use." Then on Saturday evening, January 11, 1947, McElroy and an engineer from his company flew out of Boston for Beaumont.

Kelsey, meanwhile, still fretting about his inability to obtain a perforator, simply expected a shipment of machinery from Littleton. McElroy took Kelsey by surprise:

> Suddenly the most extraordinary thing imaginable occurred. It was totally unexpected even in my wildest and most optimistic expectations:
>
> As if from nowhere suddenly Ted McElroy appeared in his own car accompanied by one of his engineers and item after item

> of McElroy telegraphic equipment: Keyers, transmission heads and drives for Wheatstone tapes, loads of paper tapes for transmission,...and last and most important a new-used Kleinschmidt Perforator in nearly perfect condition inside and out! Ted had exceeded even his own reputation as a man who was generous in the grand manner!
>
> ...His physical appearance was remarkable. He was not especially tall--in fact, I think rather shorter than my own 6'4", but he was very broad and rather florid in appearance. He spoke...with a quiet enthusiasm and certainty that I found quite appealing.

As impressive as McElroy was, so was the operation of his Wheatstone equipment. Although it would allow Kelsey to transmit his messages at 40 to 50 words per minute with pre-punched tapes, a more important purpose was that its speed would reduce diesel-generator operating time and conserve fuel for vital Antarctic field exploration needs. And apart from once having to dry the keyer in the oven when it accidentally got wet, and other minor maintenance, the equipment worked flawlessly. "Day and Night in the Antarctic," Kelsey had "a thousand reasons for being grateful to Ted for supplying this equipment."

Because of McElroy's generosity, a mountain was named on his behalf—but not in the Hollywood manner that Finn Ronne described. In another book, he admitted as much:

> In flying over unknown territory you don't point to each new feature and say, "I name thee Joe Blow Mountain"; you collect data on your plotting board and then assign names to the features later when you draw up a map of your discoveries.

In January of 1948, Ronne finally found the time to plot his flights and map the geological features he had discovered. He followed the tradition of using names of expedition members and supporters. The Kelsey family name was assigned to a glacier; a vast expanse of land was named for Ronne's wife, Edith. Kelsey, keenly aware of McElroy's contribution to the expedition, wanted him to be so honored, and Ronne readily agreed.

Kelsey telegraphed the numerous press releases and congratulatory dispatches over Finn Ronne's signature advising the world of the expedition's discoveries and the honors bestowed on those who helped. In a dispatch to McElroy, Ronne said:

> ...I took very great pleasure in naming a mountain peak in latitude seventy four degrees twenty minutes south longitude sixty four degrees west...Mt McElroy in your honor. I greatly appreciate the interest you had in the expedition and the time which you devoted in our behalf which had proved most beneficial to Mr Kelsey during our long sojourn here.

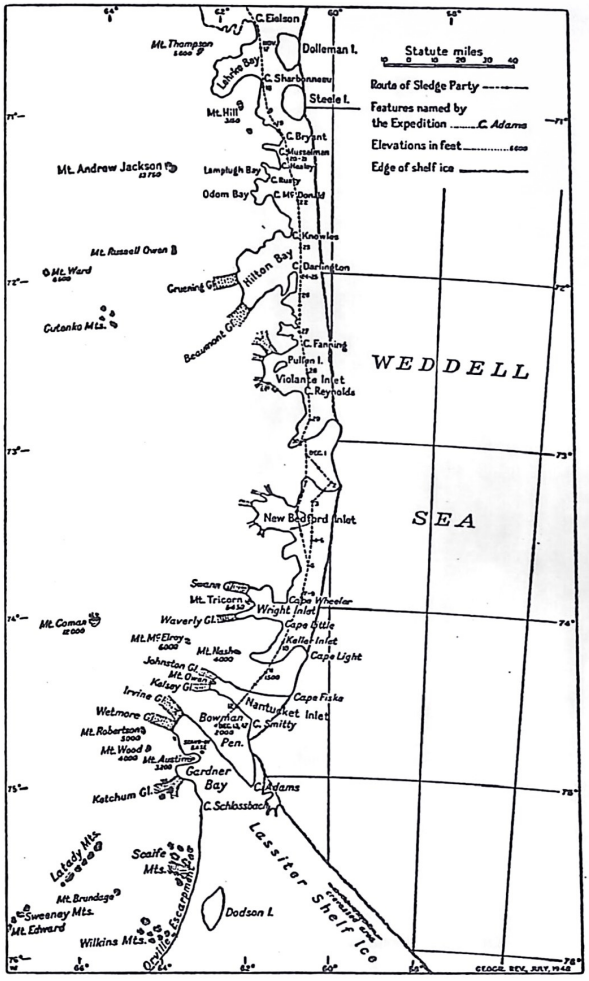
The *Boston Globe* published the news under the heading "Antarctic Peak Named in Honor of T.R. McElroy":

> In the course of its explorations of a great new portion of the Antarctic, this expedition has named a mountain, southwest of Mt. Tricorn, in honor of T.R. McElroy of Boston, many times holder of the world's record as radio-code receiving champion.
>
> The naming of the snow-covered mountain used the initials

"T.R.," since McElroy does not favor his middle and given names of "Theodore Roosevelt."

McElroy ("call me Teddy") is the millionaire head of a firm manufacturing communications instruments. Its offices are located on Jersey st., opposite Fenway Park, Boston.

Notwithstanding the *Globe* report, the name of the "snow-covered mountain" didn't include McElroy's initials, and his offices were long gone from Jersey Street. But the point of the article was correct. And so it is that in addition to his titles and trophies, Ted McElroy has a mountain named after him.



Detailed route of the joint British-American Weddell Coast Sledge Party and the Ronne Weddell Coast Party.

Mt. Coman is at latitude 74° South; Mt. McElroy is about one inch to the right of it on this map.

Ted McElroy examines equipment under test. The devices, mid-1940s models, are (at front, L-R): keying head on universal drive, three-key Wheatstone perforator, tape puller on universal drive, and ink recorder.

CHAPTER 8

I Am Not Subject to Criticism

1948 - 1955

In 1948, Jack McElroy graduated from King's Point with a Bachelor of Science degree. He went into the Navy, while his father pondered how to make the Littleton facilities accommodate what would surely be a busy manufacturing operation.

The quonset hut had a wooden building attached to the front of it. It was this structure that Theda McGrath entered in early 1949. Her friend Elinor Couchon had just left McElroy Manufacturing and suggested that Theda apply for a job there. She did, and on a snowy Saturday in February, was invited to the plant for an interview.

Once inside the building, "this enormous character" wearing a train fireman's hat came down the stairs. In a booming voice he said, "What do you want?" McGrath said she had come to see Ted McElroy about a job. "Oh," the man growled. "Come upstairs."

Oh my goodness, McGrath thought. Who is this character? ...he's not very nice. In the upstairs office, the "enormous character" started asking her questions, and still hadn't told her who he was. She was getting more disturbed by the minute. Finally, he said that he was Ted McElroy. Oh, brother, she thought, I don't know if I can ever work for this man.

McElroy offered her a job, and McGrath said she would let him know about accepting it. Later, Elinor told Theda not to let Ted scare her, that his bark was worse than his bite. McGrath took her friend's advice and started working for McElroy on Valentine's Day, 1949. She ended up staying with the company until McElroy sold it, and longer.

McGrath would eventually become McElroy's office manager, but when she started, there was no need for such a position. There were only a few people in the office at that time: Harry Chou, Jim Sullivan, Frank Haimbach, and one or two others. Fred Donnelly, a Northeastern college student, would join them part-time, on the co-op educational program.

The river of money that had flowed from wartime government contracts became a stream, then a trickle. McGrath was entering a company on the decline. But Ted knew there would be ups and downs. "In the past thirty years" he reminisced early in the new decade of the fifties, "I have made and then lost and then made and squandered enormous amounts of money. I can recall when my bank balance was considerably more than a million...." But that was then. Now, he said, "I have got some terrible worries on my mind about money...."

Despite his money worries, McElroy could still clown around in his plant. In addition to the railroad fireman's hat he wore to meet McGrath, there were others he wore when the mood struck—a train engineer's hat, a policeman's hat, a fireman's hat, a baseball cap. A visitor would never know what might be on McElroy's head when he came down the stairs from his office.

Or on his back. Because his house—the "big house"—was only a few steps from the plant, McElroy could indulge his idiosyncracies. He would occasionally arrive in his white terry-cloth bathrobe, carrying an enormous cup of coffee.

Or on his feet. If his shoes didn't fit just right, or pinched his toes, he'd cut off the part

of the shoe where his foot hurt. By the time he was through cutting, he'd made sandals out of them.

Cutting up his shoes was a habit he brought from Boston. The convenience of the Littleton plant to his house next door, to which he could walk for a change of clothing, had little effect. And if it were summer, and he was hot, McElroy would take a pair of scissors and cut of his shirt sleeves.

His appearance after these alterations could have a disquieting effect on those who weren't prepared for it. "I met him once," a local fellow recalled. "Applied for a job there in the mid-fifties. This guy come out to talk to me, one pants leg cut off here [hand at mid-thigh], the other cut off here [other hand down near the knee]. 'I'm McElroy,' he said. He looked like a bum."

Left: The quonset hut at Littleton (rear of building, viewed from Fort Pond), which was later replaced with a concrete-block building.

McElroy's shoes, like many other things, weren't bought one pair at a time. Shoes were bought in twenty- and thirty-pair lots. Shirts, by the dozen. His liking for redundancy extended to emergency preparedness. During a hurricane in the early 1950's Ted had a big coal-wood cookstove moved from the shop to the "big house" in case the electricity happened to go off for a long while. Now he had both an electric and a wood stove, but even that wasn't enough; later he had an electric generator installed.

Having extra shoes available and doubling up on his cook-stoves were a form of insurance to McElroy. But he wouldn't carry health insurance on his family or his employees. Not because he was cheap; he just didn't believe in it.

Harry Chou, the bookkeeper, loved to ski. He indulged this activity on the hills of New Hampshire whenever he could. McElroy disapproved of the sport. "I told the kid he would be much happier and safer to spend the week-end with some girl and a bottle of booze."

On the last weekend of March, 1951, Harry drove his Chevrolet to Mt. Cranmore for a couple of days of skiing. He did not have a good time. On Easter Sunday morning, Harry broke his leg.

"He now realizes that I was right," McElroy crowed after hearing the news.

"It could happen to anyone," Theda McGrath told him.

"Never heard of such a thing," McElroy responded. "Any damn fool that goes skiing..."

Chou accepted his accident with good humor. "I took it as part of my education," he wrote from the hospital. "I plan to finish two books...Just like when I went to school." In keeping with McElroy's fondness for nicknames, he signed his letter "'Bwoke' leg bookkeeping bum."

But the incident, and Chou's hospital bills, got Ted thinking. Perhaps health insurance might not be such a waste after all. What got him to act on the idea happened a couple of weeks later, when his wife, Margaret, slipped on some ice and broke her ankle. Shortly thereafter, McElroy's family and employees were signed up with New York Life for health and accident insurance.

McElroy continued to survive on government contracts, dealing on a weekly basis with the Signal Corps at Fort Monmouth. In 1951, Jack McElroy was out of the Navy; Ted brought him into the company, telling his son, as he had for years, "Someday this company will be yours, Jack." He put him in charge of the bidding on a government test set contract and, when it was won, credited Jack with having obtained "one of our most desireable contracts."

Contract work still included the training devices McElroy had manufactured during the war, like the military "school systems" jobs, as he and his employees called the Signal Corps EE-94-F and EE-95-F code practice equipments. These systems, designed to create telegraph operators out of raw recruits, consisted of an oscillator, a switchboard, several tape keyers, numerous headphones and keys, and rolls of encoded tape. A telegrapher at heart, he understood the devices that sent, recorded and trained students in Continental code.

McElroy had the code in mind when he modernized the Littleton facility in the spring of 1952. He installed an intercom system to call employees to the telephone. He had telegraph keys placed next to the phones and assigned everyone call letters to be sent on the key in Continental. This sounded horns throughout the building. "When you hear your letter go to the nearest phone and pick it up", he instructed his employees. McElroy was R; Jack was K; Bennie the Bum was H (for Halpin). Of course, he had to spell it out for the uninformed; Ted was *dot dash dot*.

The system, McElroy said, was "working out even better than I hoped." But the signals could be distracting. Since the horns were loud enough to be heard by anyone on the premises, McElroy advised his employees, "There should be no need of making a guy's call more than once."

There were other problems. McElroy had no trouble sending Continental on the system, but some of his people found it difficult to make distinguishable dots and dashes with the key. So he substituted number codes for the Morse letters. Now Ted was four dots followed by four dots. Theda McGrath was 4-1 and Conniving Joe became 2-4.

Now it was working well. And the installation of a new phone system soon allowed the numbers to be dialed, instead of tapped out on a key. The system became easy to use. Perhaps too easy. In early 1953, McElroy found it necessary to issue a brief reminder to his employees. His exasperation was shown by the fact that the memo contained only one sentence: "Please ring the call numbers on the inter-communications system just <u>once</u>."

By late that year, McElroy might have been hearing the horns in his sleep. Finally, it was too much for him. He issued a "Memo To Everyone: When you dial a number on the local intercom, dial the god-damn thing once. Some of you guys act as though the dial was a bass drum that you was having a lot of fun playing with." The warning did the trick. McElroy had finally gained control of his intercom calling system.

Ever the telegrapher, McElroy had left the keys in place when the phone dials were installed—just in case. A couple of years later, new employee Stan Sherman reported to his job as a technical writer at the Littleton plant.

> All of a sudden I heard claxons going off. I swear I heard my name in Morse: dididit dah didah dahdit. Three crisp times, then silence. "That's for Stan," I said to my boss. "Answer him, that's Ted and he's looking for you. The key is on the wall, there."
>
> So I went back with "dididit didahdit dididit dah didah dahdit." [HR STAN] Then the ruckus started. Ted came back at a good pace, but knew that the claxon echoed so he didn't go at full speed (Thank goodness. I could read up to about 35 WPM.)

Sherman found McElroy to be "fat and full of good humor" as well as a fast telegrapher.

In running his company after the war, McElroy was simply doing the same thing he had done for the last decade and a half: spending his money on people and machinery to produce telegraph equipment. That it was his money was never in doubt, no matter that the words on the letterhead said McElroy Manufacturing Corporation. He explained it to his employees in early 1952:

> Big companies have what they call a chart, which gives the names of the various guys in the joint and indicates what is their status with regard to importance to the business. To me that is a lot of junk, but because I think it might be helpful for all of us to know just where do we fit—and this is especially desirable right now, because of this Government paper work—I now give the following general set up:
>
> Me, I own the place completely. There should never be any misunderstanding. Not my uncle, not Mrs. McElroy, not Jack, not anybody—just me, I own it completely.

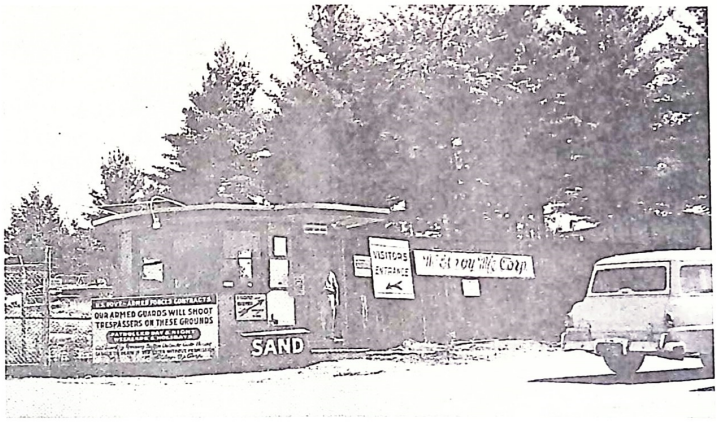
By this time, Fred Donnelly was working full time, in charge of purchasing, and Theda McGrath was in charge of the office—such as it was. In the winter, she would have to go back into the quonset hut and warm her hands at the pot-bellied wood stove, until they were warm enough that she could go back and type. Clearly, the Littleton plant wasn't as substantial as the Boston building had been, and McElroy decided to remedy that. As usual, he would do it in his own way. To tear down the quonset hut would mean lost time and business, so a new concrete building was simply constructed over it. When the new building was complete, the quonset hut inside it was torn down.

Now McElroy had a proper facility to house the machine tools and assembly lines necessary for the contract work that might or might not come in. Bidding on government production work was as much art as science. Even after a contract was won, the paperwork and inspections were often burdensome. If the numbers worked out, McElroy would make money. Sometimes they didn't. In 1950, he had bid on a job for 165 ink recorders. Over a year later, still struggling to fix the numbers, he accepted the blame—in his fashion:

> It was my fault that I took that contract at a price too low, but inasmuch as I own the place I am not subject to criticism, and, furthermore, Al Urich will guide our necessary paper work, the result of which shall be that contract will be amended and we will get a very desirable price.

There were good times, working for McElroy. The "children's hour" was held every day

around 5 o'clock in the afternoon. He'd call his friends to gather 'round—Johnny Ringleader, Bennie the Bum, Joe Goode, whoever happened to be in the plant. Then he'd bring out a bottle of scotch and regale the group with a reading of quotations from *Aesop's Fables* or the Grimm Brothers' *Fairy Tales*. On certain occasions, he would hand out copies of these books to his friends.



The gate house at the entrance to the Littleton (Fort Pond) facility. Because of "US Gov't - Armed Forces Contracts," the "armed guards will shoot trespassers on these grounds."

McElroy's employees benefitted from his generosity. The annual Christmas parties featured a band, free food and free drink. The 150 or so employees were not required to attend, but if they did, they'd find the typical fare to be 500 hard boiled eggs, 500 frankforts, hundreds of loaves of bread, unlimited quantities of good cheese "and probably potato salad—provided we can arrange to buy the salad, because I do not intend that any of the girls shall make slaves of themselves doing a lot of work making potato salad or anything else."

McElroy's largess did not extend, however, to paid holidays or vacations. Those concepts were in the same category as health insurance had been. Not wanting to appear overly-extravagant to his employees, and with tongue-in-cheek logic, early one September he laid all his employees off for one week—with pay. But, he cautioned them, "don't anybody get any notions that we are establishing a new custom of vacations with pay."

The layoffs—the ones without pay—were the other side of the coin. The World War was over, the company was settled in Littleton, and even thought the Korean War raged, McElroy found his company "living from one payroll to the next payroll and that is a helluva way to run a business." But there was little he could do when prime government contractors postponed

subcontracts, when they delayed acceptance of completed work, or when McElroy himself had a contract for four weeks' work for shipment in eight weeks.

Between January, 1951 and June, 1952, he had at least six layoffs. Sometimes it was a layoff of women on the assembly line; other times it was of men in the machine shop. When the work came in, he'd hire them back. Even those who weren't laid off couldn't feel their jobs were secure.

But McElroy did what he could to mitigate any hardship on his employees. One time he granted a full week's pay to a couple of dozen employees who he laid off in the middle of the week. "So this gives all of you your 40 hours for this week, but you have about 3 days in which to look around and file for unemployment, etc., but at the same time have a full week's pay for this week. Let us all, both you and me, hope it won't be for more than two or three weeks."

"There were many times we didn't know if the company would survive, and times when we didn't know if we were going to get paid," said Theda McGrath. Sometimes Ted would ask his employees to work a couple of weeks without pay, assuring them he'd catch up with the pay. At other times, when he was flush with money from a contract, he would pay the employees for "last week, this week and next week."

McElroy was concerned about the financial health of his company, but he was also concerned about his own health as it would affect the future of the company. He felt that Jack, now in his mid-twenties and vice-president of the company, should have been taking a greater interest in its operation. It was a classic case of a demanding father and a rebellious son. Struck with intimations of mortality, McElroy advised Jack that "One of these days I will be gone. Possibly sooner than we think." His conclusion, rhetorically stated, left no room for argument: "Dont you think that you'd be sensible to try to do what I what you to do, and learn how to run the place."

He pushed Jack to learn the business from the bottom up by driving truck, working in shipping and receiving, working on the assembly line. It would be useful "for the time when you will try to run the place, after I'm gone." Jack was, McElroy thought, less than enthusiastic. He urged his son to attend Mass. Radio School to earn a radio operator's license, and become familiar with the resistors, condensers and transformers "that are all part of our contracts."

If Ted McElroy had a hobby outside of telegraphy, it was an interest in automobiles. The company owned several ordinary trucks used for deliveries of equipment, but Ted's personal vehicles tended to be Lincolns, a car in which he could fit his belly behind the steering wheel, and Cadillacs, specially built models with standard transmissions. But the Rolls Royce he bought in the summer of 1953 would keep him occupied for over a year.

McElroy bought the 1927 Phantom I Springfield Rolls with "Riviera" Town Car body "from the descendants of the second owner...For less than one thousand dollars." It was a nice car, but McElroy was a big man, and he had some definite ideas about making it more comfortable for him get in and out of, and to drive.

The Town Car body, designed for chauffeur driving, was "wholly out of place in this day and age", so McElroy had his men remove the body. He had them shorten the cowl, and extend the front doors. The project seemed feasible since he had skilled labor on his payroll, which included his sheet metal shop superintendent who had been a bodyman for Brewster (a Rolls body supplier) many years earlier.

McElroy display at trade show, about 1954.
This McElroy and McElroy-Creed automatic Morse telegraph equipment includes both Wheatstone and inked-tape devices.

Before starting on the project, he bought books on the make, and corresponded with J.S. Inskip, U.S. distributor for Rolls and who, it turned out, had been president of the Springfield Rolls firm as well as having been "instrumental in designing" McElroy's Riviera model. "As a town car it...was one of the most expensive types we built. I remember, with pleasure, the attractive car that was built for [movie star] Marilyn Miller ...," Inskip reminisced. This was the model that McElroy prepared to customize.

McElroy had his men design a phaeton body using heavy aluminum sheet. The dash was rebuilt of seasoned mahogany, and seasoned ash and oak were used liberally. He used his connections to obtain a special order of six 700-19 whitewall tires from the United States Rubber Company. He installed "Cadillac power steering from Monroe." All in all, McElroy expected to spend about ten thousand dollars to finish it, but "it will look as though it was built for a

Maharajah" when completed. His only hesitation was on the question of whether to upholster the interior in leather or, since it was now an open car, in Naugahyde. "I can assure you that in arriving at the decision that money had nothing to do with it", McElroy asserted.

Finally, in June, 1954, it was done, and it was beautiful. With the shorter cowl and longer doors, designed to accommodate McElroy's 275 pounds, "there was plenty of room in this old Rolls Royce for my belly." He invited a group of friends for a ride, and took them to his favorite watering hole, the Bull Run restaurant in Shirley, a distance of about fifteen miles. He opened it up to 80 miles per hour on a stretch of new road, and was pleased by the total absence of vibration.

Yes, it was beautiful..."except for the body." The honeymoon ended abruptly. McElroy wasn't happy with the way it turned out. He didn't like the canvas top he had custom-made for the car; he tore it off. He felt that he had spoiled the original rear fenders by modifying them. He felt, in fact, that while "there are many things we can do very well in the United States...one of the things we appear totally incapable of doing is custom auto body work."

Still, he used the Rolls, and was getting a lot of fun out of it. Several times a week he'd take it "to a night club about 40 miles up the road, and 80 miles per hour is a very comfortable speed. God knows how fast do I drive on the way back, when I am really loaded."

To McElroy, the Rolls was "not a novelty. It is not just a show car. I use the thing all the time." He admired it from the steering wheel forward, but the "absolutely ugly" body he had designed continued to grate on him. He asked a New York Rolls dealer to look out for an old, original body that he might put on his chassis. He asked Mulliner, the London coachbuilder, if they could build a "new 1928 body" for his chassis. Eventually, the project petered out. It had become one more straw on the overburdened back of his financial camel.

While McElroy prodded his son to secure what he felt was a dependable line of succession, and while his business slipped financially, he still presented an optimistic front to the world. In early 1954, McElroy would write of the Corporation,

> We have never made a million dollars, but we have grown steadily so that since 1940 we have probably averaged better that $1 million yearly business. It commences to appear now as though we may be rather firmly established so as not to be dependent on war business. We will continue to exist and probably continue to grow.

The actual state of affairs was quite different. For years he had depended on government contracts for Morse equipment. Now he admitted that he had "known for years that the days of Morse telegraph equipment are coming to an end." Searching for something to replace it as his "main peacetime business", he had signed a license agreement with an Amarillo company giving him "the sole and exclusive rights to manufacture telephone equipment, which is called Carrier Systems."

The telephone carrier system was a method of providing up to five communications channels on one phone line. It would, McElroy hoped, resurrect McElroy Manufacturing Corporation by providing a production line product, rather than limited government projects that required "building pieces of equipment one at a time and using top supervisors to do the job".

There was just one problem: The carrier system that McElroy had acquired wasn't fully

designed. Rather than obtaining the rights to manufacture equipment, he had acquired the prospect of pouring tens of thousands of dollars into a bottomless pit. After a year and a half, he conceded that none of the Amarillo equipment had ever worked.

His own engineers had designed better devices in that time, "and when we sell telephone carrier with our name on it then it will be telephone carrier designed and built by us...." By mid-1954, between funding Amarillo and his own workers, he had invested $150,000, and considered half of that to have been wasted.

At this stage, any product that would bring in a dollar was worth pursuing. He had been receiving inquiries about spare parts and inked practice tapes for the TG-34 phototube keyer that was appearing on the surplus market. Toward the end of the year, McElroy tried to drum up interest in his automatic equipment among amateur radio operators, to whom he could sell his stockpile of government-rejected inked tape. After a seven-year hiatus, he ran a couple of ads in *QST* magazine. They would be the last ads from Ted McElroy to appear in the magazine.

As money got tight, McElroy had some employees working Tuesday, Wednesday and Thursday. Others worked Mondays, Wednesdays and Fridays. Everyone did what had to be done. Theda McGrath, the office manager, did shipping and other non-office jobs on Mondays and Fridays. Now almost a half-million dollars in debt, the company was barely keeping afloat. McElroy felt it couldn't survive.

Jack McElroy agreed that "it was tough times," but that he "had everything under control." His participation at this time was such that he was, he felt, "running the company" that would one day be his.

Then one winter morning in early 1955 Ted came down for coffee and said to Jack, "I sold the business last night."

CHAPTER 9

I Already Had Combed My Hair

1955 - 1963

Jack McElroy was stunned when his father told him he had sold the company. "You didn't have to do that," Jack said. The company could survive. He, Jack, could get the money that was due them on completed contracts. Ted shook his head. "No, you can't do it, you can't do it." There was nothing, really, to discuss. The deed was done.

In February of 1955, Ted McElroy had agreed to sell his company to Warren Scott, of Chicago. On March 3, the agreement was ratified by a new Board of Directors, and the name of the company was changed to The Warren Manufacturing Company, Inc. In exchange for the ownership of the company that had borne his name for over twenty years, that was the principal supplier of high-speed telegraph equipment to the Signal Corps during the war, and that just a decade earlier was grossing millions of dollars each year, Ted McElroy agreed to accept $100,000, some of it on the installment plan. Along with the assets of the company went the reason for the sale: A dark cloud of debt. There was a small silver lining, however: Ted owned the buildings and the land himself. These he sold to the company separately.

Scott sent in Warren Dornhoefer to run the business. For the most part, things went along as before. And as Jack had predicted, within a week he brought in $70,000 for the new owners.

One of the assets of McElroy's company seems to have been Telecommunications Corporation. Ted liked the word; as early as 1953, he had put only two words on the cover of his company catalog: McElroy Telecommunications. His ad for the 1955 edition of the ARRL *Handbook* was placed over the name of "Telecommunications Corporation," offering Wheatstone Morse tape equipment manufactured by Great Northern and Creed. The ad named John McElroy as president of the company, but the whole thing was Ted's idea.

Perhaps McElroy had though that he'd sell McElroy Manufacturing Corporation separately, saddled as it was with debt and with the telephone carrier system hanging like an albatross around its corporate neck. Then he and Jack would concentrate on selling tape equipment through Telecommunications Corporation.

Perhaps. But the new company was merely a figment of McElroy's imagination, existing in name only. McElroy had not even filed articles of organization with the state to formally incorporate the company. And when McElroy Manufacturing was transferred to Warren Scott, the figmentary corporation followed. A public announcement stated that

> the company plans to increase its operations in the telephone and telegraph field. Sales and service for such products will be handled by Telecommunications corporation, a wholly-owned subsidiary presided over by Mr. Scott. Mr. McElroy will continue with the organization and will be concerned particularly with sales of these products.

Telecommunications Corporation existed briefly for the next year or so, typed at the top of form letters concerned with inked-slip code practice tapes. And then it was gone.

Some of McElroy's former employees would continue to work in the building on Fort Pond for many years, through changes of names and ownership. Joe Goode, in Chicago, continued to represent the company in the midwest and west. For many, nothing had changed but the name. Ted and Jack stayed on a while, but for them it wasn't the same.

Ted boarded the RMS *Newfoundland*, bound for England, in the fall of 1955. He hoped, finally, to conquer his "horrible problem" and lose some weight on the twelve-day voyage; his goal was to drop from 270 pounds to 255 by the time he hit Liverpool. And to "stay on the water wagon" for the duration of the trip.

By the third day out, McElroy was ready to admit the main purpose of the trip: "What a grand and glorious feeling to be on a vacation like this with no worries. Regardless...of what happens with the new "people" this vacation is wonderful....If I aint the luckiest guy in the world I'm damn near the top. Thanks to Warren Dornhoefer for your blessings on this vacation."

It wasn't long before he was also ready to admit that losing weight in the face of the tempting shipboard menus wasn't easy. Rather than lose weight, he was afraid he might even have gained some. And despite other good intentions, he hadn't studied the *Radio Operators Q&A* book he had brought along.

McElroy docked in Liverpool, then flew to Dublin, Ireland, where he "fell kerplunk good off the wagon". He sent a cable to the his friends at the Bull Run, following which "the guy let me go upstairs to their operating room. Very old style Morse sounders and terribly clumbsy Morse keys, but they still use Morse. The guy was receiving messages from Ballinasloe while I was there and I called the stuff off to their surprise. Regular Morse sounder, using Continental Morse code. No typewriters, they take it by pencil or pen." Back at the Gresham Hotel, McElroy ran into "a very fine looking and well educated Irish guy":

> He told me that if I wrote to Bill Halligan to tell Bill that the transmitter used by the underground I.R.A. (Irish Republic Army) was a Hallicrafter transmitter which they bought in Baltimore, Maryland. That the British after some years, finally caught up with them, even though they moved frequently and rapidly and British grabbed their Hallicrafter transmitter. But they got away with their Hallicrafter receiver. I thought it quite interesting...

McElroy returned to England, where he stayed with Reg and Hazel Adams. He was surprised at the lack of central heating:

> [Reg] owns as nice a house as there is in a nice suburb of London, town called Petts Wood. A real nice house. No heat in any room, excepting real fireplaces and imitation fireplaces. The room where I sleep is real cold all the time. Natcherly, I hafta sleep with windows open, otherwise wouldn't be able to sleep.... And that is typical of every house over here. In Ireland it is worse.

Ted was a typical tourist. He was surprised by the "considerable bomb damage to be seen in and around London", the horses and wagons, the many people on bicycles. The old cities in

England and Ireland "all look as our cities did look about 75 years ago. Hard to believe, but it is a fact." He and Reg spent several days together sampling the pubs and restaurants of Petts Wood before McElroy returned to Littleton, and Warren Manufacturing.

Work may have been much the same for McElroy's former employees at Warren's, but for McElroy himself one thing, unfortunately, proved to be too much the same: Making money. As time went on, Warren Manufacturing experienced difficulty in making the purchase payments to McElroy. Ted felt increasingly bitter, and eventually, he felt out of place. For his part, Jack hadn't forgotten his desire to run a company of his own.

Since 1954, Ted had been interested in buying the railroad depot at Littleton. The Boston and Maine depot had "the finest location in town and it is one of the prettiest buildings in the town." McElroy wanted to use the building as "the most beautiful Democratic Town Committee Headquarters anywhere in the entire State." In May, 1955, Ted and Jack purchased the property. Since it was still used by the railroad, B+M had reserved the right to continue using a waiting room, baggage room and ticket office. The station agent, Russell Lawrence, would continue to perform his usual duties, presumably as ticket agent, baggage handler and telegraph operator.

Two years later, Jack formed McElroy Electronics Corporation, and the depot was transferred to the new company. McElroy was in business again, only this time it was the son's business. Initially, his principal products would be the automatic Morse equipment so familiar to him. Ted, finally fed up with Warren's, settled behind a desk in a corner of the depot. And after a while, it sometimes seemed to Jack that his father "was just part of the building."

Now Ted was truly retired. What to do? "Spent about a year in Ireland and England", he exaggerated later, explaining why he went back to work, "but, loafing drives almost anyone to the booby hatch. Bar rooms, clubs, hoss tracks - they become pretty monotonous as a steady diet." It seems to have been a diet that worked: By the end of the year, he was down to 240 pounds (but it wouldn't last).

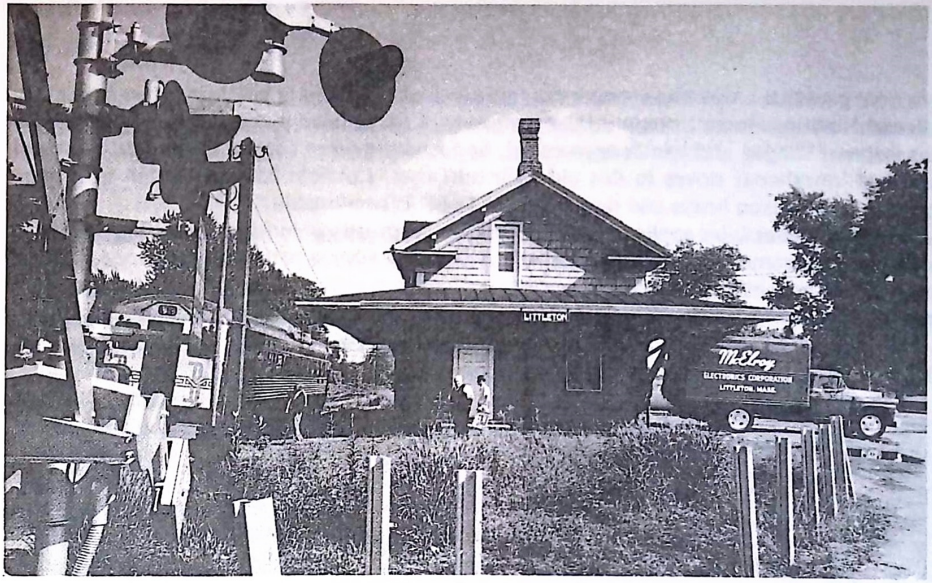
Bored, McElroy cast about for new ideas. He "established a business of applying plastic (nylon) ends and bellies to bowling pins"; rumor had it that Ted Williams (of baseball fame) was a partner in the business. But McElroy felt the process "wasn't too satisfactory" and began "dickering" with companies in Chicago and Boston to sell it.

Then he wrote to Norwood Technical College in England, inquiring about their communications courses and the English radio operating industry in general. He wrote to the Liberian Bureau of Maritime Affairs, asking about the requirements for obtaining a radio operator's license from Liberia.

Finally, feeling he would "go crazy if I don't do some work", he decided to go into sales. He had been a salesman all his life, hadn't he? It should be easy to get back into it, because "all a salesman needs outside of ambition and willingness to work, is an automobile...and a decent appearance."

Not having a company of his own, McElroy decided to be a representative for another—but which one? His thoughts turned to Saratoga Industries.

During WWII, Espey Manufacturing Company had come to McElroy's rescue when he needed help in fulfilling military contracts. The New York company had made "thousands" of his phototube keyers. It wasn't long before McElroy and the folks at Espey, including its president,



The Littleton Depot. Ted and Joe Lessard by door. (July 1962)

Nathan Pinsley, had become friends.

Nathan's brother, Sol, had a transformer company in Harlem. In the early 1950's, Nate asked Sy Saslow to move Sol's company to Saratoga Springs as a subsidiary of Espey Manufacturing. The subsidiary, named Saratoga Industries, prospered. It had, in fact, made all of Bill Halligan's special equipment for the Air Force.

When McElroy looked around for a company to represent, Saratoga was an obvious choice. He campaigned for a job as "New England sales representative for some old friends in the radio business, the largest of which is Saratoga Industries of Saratoga Springs, N.Y., manufacturers of transformers." His friends welcomed him.

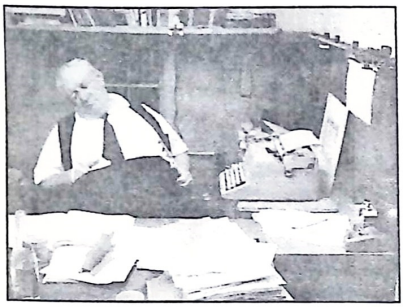
He started his new venture in early 1958. Within a month he had a new letterhead, and long, rambling letters poured out of the Littleton depot bound for his friends (and employers) in New York. McElroy told of the company buyers with long memories: "'Not THE Ted McElroy' sez them. Yeah, sez me, wiping my mouth modestly. (not too modestly) - God damn it, ... they all remember....'You the man with all those records in telegraphy' - Yeah, sez me, humbly (not too humbly)". He told of his plans, and how easy it would all be: "All I gotta do is get off my chair...and see some of these bums....If I dont do no good, it is positively my own fault. Be patient until I learn how to do a real good days work. I'm getting inta the swing."

Chatty, familiar letters flowed from the depot to buyers at Raytheon and Sylvania and the myriad of other electronics firms up and down Route 128 in Massachusetts. He hired "a girl to help write letters. I might as well admit the truth -- if I were not so god-damned lazy I could grind out the letters almost as fast as I can dictate the stuff...."

McElroy looked toward the future, but, settled snugly in the depot, he was still "dreaming dreams of the radio shack on a freighter maybe heading for Singapore-itz or

anywhere else that a wireless operator can find mischief." He'd sit in his chair "down here at the Railroad Station, alone, listenin' to the symphony of the railroad telegraphers...." Even when the seasons changed and winter approached, he found the depot cozy. "Y'cant beat those old fashioned wood-coal stoves in this old Railroad Depot. Colder'n hell outside but with some rubbish, then broken boxes and then logs, this Depot is comfortable."

Nevertheless, he applied himself to his new occupation—in his fashion. In addition to Saratoga, he became a sales representative for a couple of other, smaller companies. At the same time, he tried to help Jack procure government contract work, in addition to squeezing in a personal appearance as the "World's Champion Radio Telegrapher" now and again.



"All I gotta do is

get off my chair."

It all sometimes resulted in a hectic schedule. On the last Saturday in April, 1958, he drove to Philadelphia for dinner at the Alpha Club, where he was declared "The outstanding telegraph operator of all time." A Western Union telegraph line had been arranged with terminals at many cities throughout the country so that various Morse clubs could exchange greetings celebrating Samuel Morse's April 24 birthday. Members of the Morse Telegraph Club of America and others sent congratulations and greetings to McElroy over the wire. McElroy enjoyed the meeting, finding it a "Lot of bull shit - but it didn't cost any money and I had a free feed and only charge I hadda make a speech of acceptance etc."

On Sunday he drove to Fort Monmouth, New Jersey, to visit his Signal Corps contacts, and on Monday he drove to Brewster, New York, to check on an order Jack had received from the Navy only to discover that he was at the manufacturer's plant and the prime contractor was in Rochester. "After a hell of a drive over the NY turnpike I slep' in Rochester", saw the contractor on Tuesday morning, and got back to Littleton that night.

Between Saratoga Industries and Jack's business, there were family matters. Some were pleasurable: His grandson, Jack Jr., seven years old, would call "demanding that I cease all activities and pick him up and take him to Grandma's house for dinner." In another vein, he was bothered by calls from his brother Paul who would call "on an average of once a week ... to insist that my mother was ready to die today." He considered Paul's calls "ridiculous raving ... but because I don't know when there might be something to it, I am afraid I will have to ... go down to see my mother."

One day in early June there was "something to it." McElroy's nephew, John W. McElroy, was a priest; he presided at the Requiem High Mass for Ted's mother. The ceremony was, according to McElroy, "a real hum dinger ... My mother would'a got a chuckle out of it...."

Between business and family matters, McElroy participated actively in local and county politics. For several years he had been regularly elected to the office of secretary-treasurer of the Democratic Town Committee; a few months earlier he had been elected a delegate to that party's state convention. Now, in the fall of 1958, he made his first run for a major office—as State Representative of the Twelfth Middlesex District.

Although McElroy "got more votes than any other Democrat who ever ran for the job", he lost. But he had a plan for the future: "Now that the Democrats are in 100% control of the House and the Senate, we'll redistrict the area and in two years I'll walk in."

Lightning didn't strike in 1960, either. In mid-year he ran for the office of Selectman in his hometown of Littleton; in November he again ran for State Representative. McElroy was unsuccessful in both races, but the November election did leave him with a supply of left-over political brochures that he could send to company buyers "to break the ice so that when I do write, you might remember me."

The back page of the brochure included a layout of the International Morse code, a display of his trophies, and mention of his first and last records—getting the Asheville speed wrong at 77 words per minute. And lest the buyer was inclined to toss the brochure out, McElroy always advised that "if you have a son or grandson, give it to the kid rather than throw it away" because "The Morse code is extremely well set up and kids like that."

His district voters may not have wanted him as their Selectman or Representative, but he remained an active and influential Democrat. He was friendly with many local and state politicians, and was able to arrange small favors such as the return of a license lost for drunken driving, or obtaining low-number vehicle registration plates. He became the chairman of Littleton's Democratic Town Committee, and often held meetings of the Committee at the depot.

A year after his last political defeat, McElroy received a pleasant indication that he was still remembered as the world's champion radio telegrapher. Orlando Nobrega, the public relations director of Brazil's Mail and Telegraph Department, invited Ted to participate in a receiving contest sponsored by the Brazilian Post Office magazine *Mensagem*. It would be held in Rio de Janeiro on December 17, 1961. It was a national, not a world, championship match, but to make it interesting the sponsors had thought of inviting McElroy.

The invitation didn't give him much time to prepare. On the 14th of November McElroy wired his acceptance to Nobrega. Still mindful of the value of publicity, he informed the local newspaper, the Ayer *Public Spirit*, which ran a brief front-page story in its November 23rd edition under the headline, "World Champion Telegrapher to Compete in Brasil."

A few days after Thanksgiving, McElroy was confident that he could beat the Brazilian telegraphers he would be competing against, including their national champion Bulcao Redig. "I can win of course", he informed his friends. Two weeks later, he wasn't so sure.

> Have done a little bit of practice and am afraid I will do not much better than 50 words per minute. No secret to it, just not enough

practice to make up for 20 years away from the stuff. I wont be broken hearted, when I do the 50 minimum I expect, it will prove to me I aint completely in my dotage yet.

First, McElroy had to get to Brazil. The contest sponsors were paying for his airfare and hotel accommodations. He had been revaccinated, and his passport was in order. But everything else was confusion. Airline tickets would be waiting for him in New York, he was informed, for travel via "Pan America"; he would arrive in Brazil on the 12th of December. No, make that Eastern Airlines from Boston. By the 13th, the tickets had supposedly been paid for, but would McElroy "cable Orlando Nobrega...informing date your arrival"? And by the way, the competition is the 16th, not the 17th.

But Ted was already at Logan airport in Boston, hustling between the Eastern and Pan Am desks, looking for his tickets without success. "I waited three days at the airport in Boston for the transportation," he later said. But as far as his friends knew, McElroy had left for Rio. A few days later, they became concerned when news of a great circus fire in Brazil reached them. Had Teddy been there? Was he all right? When they finally got word from McElroy, it was on a postcard—from Ireland.

At the airport in Boston, McElroy had finally decided that if and when his tickets arrived, it would be to late for the Brazilian contest. Should he return to Littleton? "I already had combed my hair," he reasoned, "so I took off for a visit to London." He visited his friend Reg Adams in Kent, then made his way to County Clare, Ireland, his mother's homeland.

He finally arrived back in Littleton on the 20th, suitcase and an Irish Black Thorn walking stick in hand. What had begun as a chance for McElroy to defend his title in Brazil ended as a vacation in the old country. It was probably just as well; his title remained intact.

As soon as Christmas '61 was over, McElroy jumped into a new project involving his love of telegraphy. Maybe it was practicing for the Brazil contest that got him thinking about the code again, and about a code oscillator that he could build.

He thought a practice set would make a nice gift for those buyers, so important to his success with Saratoga, who he wanted to impress with a present. And perhaps the project could result in a product that Jack could sell as kits through McElroy Electronics. Whatever the reason, McElroy wanted "to design and build the very best audio oscillator for Morse code that has ever been produced." But it wouldn't be just an oscillator:

> I would mount said oscillator on a base containing a J.H. Bunnell telegraph key and a genuine Vibroplex "bug" and I'd make damn certain I adjusted both key and bug for best results.
>
> Sticking out on top of said base I'd have a genuine resonator complete with Edgeworth or Prince Albert tobacco can. Also a companion upright unit with similar or same resonator as a baffle for a small 3" speaker. Also mount a neon bulb.
>
> There'd be a switch to make it possible for the guy to key the 4-ohm telegraph sounder complete with tobacco can; also to key the oscillator...

The presence of the resonator and sounder illustrated McElroy's continued love affair with Morse. The "wonderful romance" associated with the code was brought to mind by the

"beautiful tones arising out of the beat of a sounder tuned to Prince Albert or Edgeworth". To have built a device capable only of Continental while omitting the "rythmical symphony of American Morse" would not result in the kind of magnificent gift he had in mind.

McElroy was enthusiastic about the keepsake he would build, and spent the early part of 1962 designing it in his head. It would be recognized by its recipients as "the greatest trophy ever built in the telegraph (electronics) biz." High on his list of those who would be given the device was a longtime friend. "It'd be the greatest gift in Halligan's life," McElroy said.

He felt he didn't have the knowledge to design the oscillator, so he leaned on his friends at Saratoga to design it for him. McElroy provided the specification. It needed volume and tone controls, had to be portable and therefore battery operated, and "strong as a bastard" if it were used in an automobile "so a guy in the automobile in front of you could hear it."

McElroy kept pretty much to himself in his corner of the depot, working on his project. Resonators, sounders and hand keys came in from Bunnell; semiautomatic keys came from Vibroplex. Saratoga sent a circuit diagram, and a friend helped McElroy build the "practice sets," as he called them. Jack, busy with his own business, thought his father was "trying to sell the audio oscillator device." But Ted had no intention of marketing the sets; they were "Not to make money because there wont be any money in the deal. But to give to guys important who might be hard to give anything to."

McElroy was looking forward to being able to present the practice sets to those "who it is almost impossible to impress with a present". Finally, in May, he had completed one. "By gosh aint it beautiful", McElroy said of the set, and before the end of the month he had built and given away a half-dozen of them.

He could hardly continue to give them away; each one cost McElroy $100 to $150. And they didn't bring to McElroy "the millions of dollars worth of business that Saratoga should be receiving". Maybe a less expensive gift, given to many more buyers, would do the trick. But what would make the ideal gift? The question was on his mind when the Army Security Agency decided to take photographs of its trainees at the Bull Run. One shot would be of "a gang of student radio operators gathered in front of one of my Charts of Morse code" that hung on the wall of the restaurant. And that gave him the idea.

It would have to be done right. A decade earlier, he had designer Bob Sale arrange for photographs of his Fort Pond plant; taken from a helicopter, they had been most impressive. Now if Saratoga would just arrange for a helicopter shot of their plant, which McElroy would pay for, he'd replace the McElroy Manufacturing graphics on his Chart of Codes with shots of Saratoga Industries. "I had such pictures taken of my old place and it cant possible cost more than $25.00 or $50.00 absolute tops." In fact, he had already mailed out over 100 letters to local buyers informing them to expect the chart shortly:

> I'll mail you a copy of a nice looking Chart of Codes and Signals. 33" by 23" a really pretty set-up of American Morse, International Morse, Japanese, Rooshian, etc., Signals, Flags, etc.. Here again if you have relatives or friends, teen-agers they'll enjoy it for a hobby room.

For good measure, he enclosed with the letter one of his old political brochures that "will be interesting to any youngster of teen-age. The Morse code is extremely well set up and kids like that."

Finally McElroy informed a friend at Saratoga that he was "reactivating" his code chart, and would he arrange for an aerial photograph of the company? He had asked another of his friends there about it "but I get the impression he has those headaches which take all the energy out of a guy."

Trying to keep a leash on McElroy would give any employer a headache. "Please refrain from soliciting or otherwise contacting any firms on our behalf unless you have received prior instructions from us to do so," came Sarasota's exasperated response. Of the 140 companies McElroy contacted, only one account had been assigned to him. And as for the code charts and political brochures, "please do not send literature of any nature to anyone on our behalf unless instructed to do so."

McElroy was abashed. "Gee: I hope my letters did not displease you. I meant well." The great reactivated code chart project died quietly.

McElroy didn't have time to dwell on the aborted chart project, because *Life* magazine had come to town and he would soon be world-famous all over again. A photographer and a writer on assignment from *Life* arrived at the depot at the end of July, 1962, to put together an article on Jack and his McElroy Electronics Corporation. The magazine was planning an article on "small science industries," and Jack's shop was surely as picturesque as any. As luck would have it, Jack was away on business.

But the depot was there, the photographer was there, and most of all, Ted McElroy was there to show the writer and photographer around, explain everything to them, and pose for pictures. McElroy and Joe Lessard, one of Jack's employees, stood out by the railroad crossing signals for a few pictures. Ted, dressed in a vest and tie, looked very much like a successful business owner. He sat behind his desk in the depot between his telegraph practice sets, looking like the world's champion radio telegrapher. But the *Life* article went the way of most magazine projects: It never ran. Jack's business didn't get the publicity the article might have offered, and Ted didn't receive the fame of having his picture in *Life*.

National publicity may have eluded him, but Ted was still remembered locally. In September, he received a call from a Boston broker who needed replacements for two telegraph operators scheduled for vacation. McElroy accepted, and when the operators saw him walk in one exclaimed, "Thank heaven! We thought you were rich, and didn't want to work anymore." When offered a chance to work the wire, Ted McElroy would have done it for nothing.

If *Life* didn't resurrect McElroy's fame, the *Boston Globe* did, at least locally. In early April, 1963, Ted Ashby featured McElroy in his folksy "Calling on the Neighbors" column. The accompanying photo showed McElroy operating a Vibroplex bug. In the column, McElroy recalled the Brazil contest fiasco, and told stories of his accomplishments. His longtime practice of referring to his wife, Margaret, as "Mrs. McElroy" must have caused Ashby to ask what her first name was. "I'm sorry," McElroy said. "I don't know her that well."

McElroy continued to worry about his weight and his health. Late in 1962 he complained of being "frightfully sick for 2 or 3 or 4 weeks." An indication of his concern was that he stopped drinking. By January, it was evident he had a serious problem with his heart.

He was soon back to work representing Saratoga, and regaled his friends about his improved health. Within three months, he had his weight down to 240 pounds—again. The price,

Ted prepares to pose for Life *with his practice sets. (July 1962)*

however, was too high for McElroy. "The doctors tell me I won't live another six months if I don't go on the wagon," he said. "But who the hell wants to live six months on the wagon." He was, occasionally, getting "good loaded" again.

He managed to continue to lose weight, but by late summer he would feel "weak after a hectic day". At McElroy's regular check-ups, his doctor was reassuring, telling Ted he was in fine condition. By the fall, his weight down to 211 pounds ("and if I wanted to cheat a little bit I'd say 210"), he would have spells of tiredness and of not feeling right, even in the morning.

On November 8, 1963, he joked with his doctor about getting a job as a radio operator in the Israeli Army. His doctor "said I'm in good shape and no fear about going to Israel if they got a job for me...."

Four days later, Theodore R. McElroy died of a heart attack at his home in Littleton.

CHAPTER 10

His Key Was Silent

1963 and after

Ted McElroy died, the death notices stated, suddenly, but he had suffered with a heart problem for the last few years of his life. Perhaps no one but McElroy and his doctor were aware of it that early, although it had become apparent during his last year. Finally, at 8:30 A.M. on the second Tuesday of November, 1963, it became fatally manifest.

McElroy was waked at the Badger Funeral Home in Littleton, where the funeral was held on the Friday after his death. Following the funeral, a Solemn High Mass was held at St. Anne's Church. McElroy was buried at Calvary Cemetery in Boston.

His friends and relatives came to pay their respects, or sent flowers if they couldn't. Or they requested Masses for Ted, or sent letters and telegrams of condolence to Margaret. They were a who's who of McElroy's life. His family, of course, including nephews and siblings. And all the others down the years: Bill Halligan. John Contini, Frank Bascomb and Larry Donnell. The ARRL, the Wireless Operator's Association and Mackay Radio. The Bull Run Club. His friends in politics: Governor Endicott Peabody and Senator Edward Kennedy. Congressman Philip Philbin. And many more, including Art Stockellberg, a member of the Veteran Wireless Operators Association, who "dropped into the funeral parlor..., signed the book with the initials V.W.O.A. after my name. Big crowd to see that grand old guy off, but his key was silent."

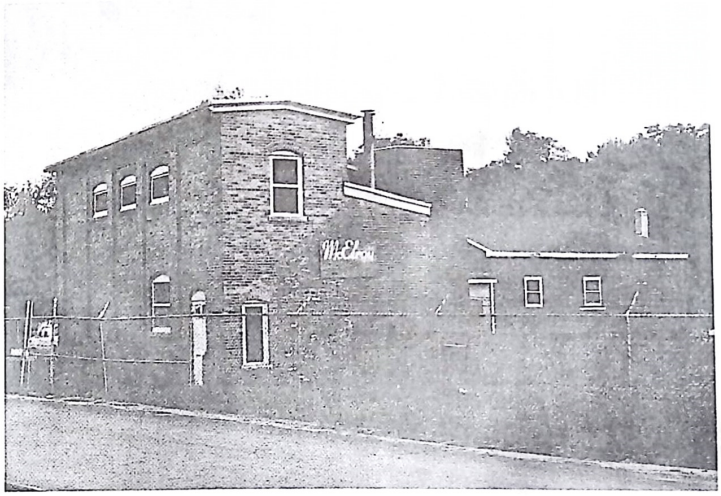
Two months after Ted died, the Morse Telegraph Club announced in the inaugural edition of its newsletter, *Dots and Dashes*, that each year six "current or contemporary" and six "out of the past" outstanding telegraphers would be selected to the Morse Telegraph Hall of Fame, proposed to be located in Philadelphia's Pen and Pencil Club. Ted McElroy, now "out of the past," joined Samuel Morse and Thomas Edison in the Hall of Fame.

In late 1962, Jack McElroy had bought an old cordage works building in Shirley, Mass.; he moved McElroy Electronics Corporation into it. He continued to produce many of the Morse devices that his father had made, with one exception—telegraph keys. In 1965, he decided to reproduce two of the keys that Ted had made in the thirties, a hand key and a bug. Manufacturing the hand key wasn't a problem; it was much like the J-38 training keys that he still made for the Signal Corps on contract from time to time. And to illustrate the new bug in his flyer, he refurbished one of his father's old Mac-Keys. Rather than attempt to reproduce the 1930's "marbleite" finish, he painted the base in gray hammertone.

In 1968 that he advertised the hand key to radio amateurs though *QST* magazine. Those who ordered one found that it came in a plastic jewelry box together with a little "McElroy" hand key lapel pin. But sales were disappointing. A hundred or so were sold; Jack decided that hams just weren't interested, and production ceased. As for Jack's Mac-Key, none were ever made.

Jack sold the Littleton depot in 1969. The manufacturing buildings at Fort Pond, vacated

by their last tenant in 1992, stand empty and for sale. McElroy Electronics Corporation, now producing components for the transformer industry, is still in the brick building in Shirley. Jack's three sons, Jack Jr., Dan and Mark, work for the company.



McElroy Electronics Corporation
(entrance is at left side)
Shirley, Massachusetts

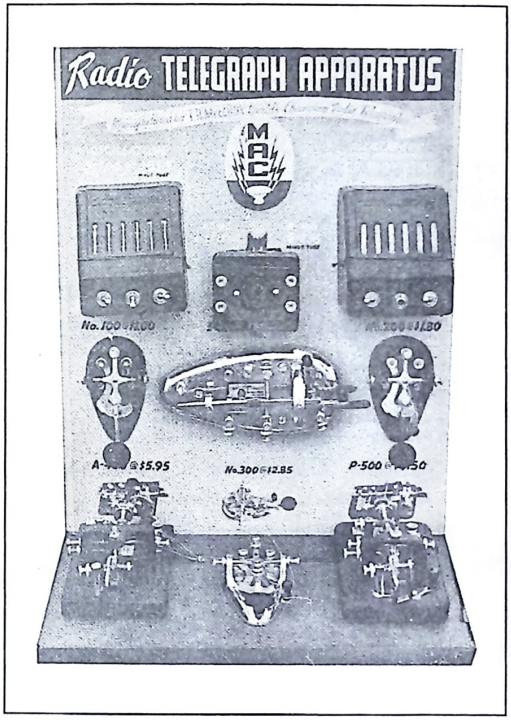
Through the efforts of Ted's grandchildren, a room on the second floor of the Shirley building is slowly becoming a repository for the signs, "E" flag, keys, trophies and other memorabilia of their grandfather Ted McElroy, the World's Champion Radio Telegrapher.

Opposite: Factory display of code practice devices and telegraph keys. McElroy's ads date the display to 1940. Ron Trench (WB1EYX) collection.

PART II

The Telegraph Keys of

T.R. McELROY



T. R. McElroy

*World's Fastest Radio Telegrapher**

OFFICIAL RECORD— *(never equalled)* 56½ WPM CHICAGO 1922

AUTHENTIC RECORD— *(not in tournament)* 73 WPM CHICAGO 1933

Announces the MAC-KEY *the perfect* *Semi-Automatic and Straight Key*

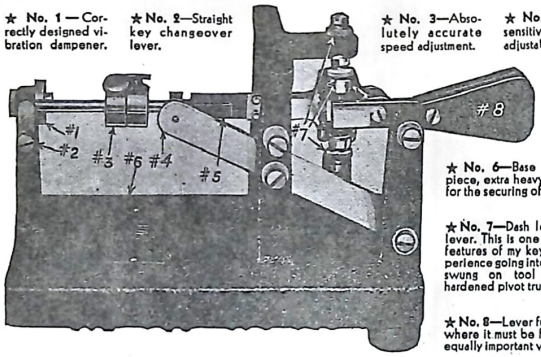
"I'll not write a lot of bunk about my key. I'll tell you these truths: Each Mac-Key is adjusted by myself and shows perfect speeds 8 wpm to 45 wpm; each is an exact duplicate of the key with which I've established records in sending Morse & Continental code these past 15 years. Each is sold with my guarantee that you can send better with a Mac-Key than with any other instrument made—or your money refunded after 5 days trial."

★ No. 1 — Correctly designed vibration dampener.

★ No. 2—Straight key changeover lever.

★ No. 3—Absolutely accurate speed adjustment.

★ No. 4—Extremely costly and sensitive platinum contact points, adjustable without changing faces.



★ No. 5—Main spring selected after costly metallurgical research and personal painstaking experimental work.

★ No. 6—Base and superstructure, one piece, extra heavy casting. Rigidity necessary for the securing of smooth rhythmical sending.

★ No. 7—Dash lever suspended from main lever. This is one of the two most important features of my key. Remember, 15 years' experience going into each Mac-Key. All levers swung on tool steel pinions between hardened pivot trunnions.

★ No. 8—Lever full hand width above table where it must be for correct sending. This is equally important when used as a straight key.

I EMPHATICALLY assert that my key is the only one made with which it is possible to send perfect Continental code with its multiple dash figures and letters.

Price $17.50 f.o.b. Boston. Temporarily subject to 40% discount.

Whether I can continue this customary discount depends upon volume. Take another peek at my guarantee. Then see your local dealer or write me direct enclosing money order for **$10.50.** If you think you've been enjoying ham radio heretofore, wait'll you try a **Mac-Key** and hear code you never dreamed yourself capable of turning out. But do it now, please. I've put my whole life into my key. Honestly, it is marvelous.

Won't you please justify my faith in ham operators and order NOW if you can dig up the ten fifty. 73'S EVERYBODY, AND I REALLY MEAN IT.

T. R. McELROY, 23 Bayside Street, Upham's Corner P. O., Boston, Mass.

**Official champion of the world, 1922 to 1933.*

Distributed in metropolitan Boston by the RADIO SHACK, 46 Brattle St., Boston

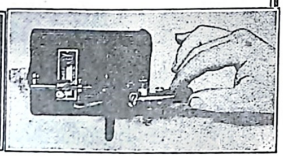


Fig. 11.1: 1934 Mac-Key. By the time this ad appeared, McElroy had already changed the design. (December 1934 QST magazine)

CHAPTER 11

McElroy Speed Keys

Many people are interested in Ted McElroy for one reason: the telegraph keys that he manufactured from late 1934 through 1942. He first made bugs (semiautomatic keys, also called speed keys), which he dubbed "Mac-Keys," and later added straight keys. In this chapter, I show the various models of McElroy's speed keys and discuss some of the variations that the collector may find. There are, undoubtedly, many unknown variations waiting to be discovered.

Right from the start, McElroy tinkered with his bugs. Between major model changes are many minor changes. Each of these show McElroy's attempt to improve its operation or simplify its manufacture. Some of the models were never illustrated in his ads; many of the variations were very short-lived. For these reasons, a customer who ordered a Mac-Key from McElroy in the 1930's really didn't know exactly what he would receive.

McElroy documents this "mystery key" phenomenon in his 1937 ARRL *Handbook* ad. He shows an early 1936 bug, but then says that "the ones I now ship are quite a lot better.... I was able to make an awful lot of improvements on the regular key." As the saying goes, you pays your money and you takes your chances. But at least you knew you'd get a Mac-Key, whatever it was.

There were also options. Sometimes this was no more than the addition of a circuit closer (the 1936 Special). In other cases, choosing the "deluxe" model resulted in a fancy base finish, larger adjustment screws and a circuit closer (the no. 600).

McElroy didn't use different model names to distinguish the major changes to his cast-iron bug until mid-1937, when he introduced his "new 1938 Mac Key." But before that, there were five distinctly different Mac-Keys, plus one major variation, plus many minor variations. I have, therefore, taken the year-model designation style that McElroy used for the 1938 model and applied it to those keys which he failed to differentiate by a model name. And just as McElroy's "1938" model appeared in 1937, my year-names aren't intended to be an accurate reflection of the actual appearance of the key. Their purpose is simply to permit a handy nomenclature for collectors when discussing a particular style of Mac-Key.

1934 Mac-Key

Ted McElroy made his first key (**Fig. 11.1**) in the sun room of his apartment at 23 Bayside Street in the late summer of 1934. His first ad would appear that December. The bug was offered for $10.50.

One of the things that sets McElroy's early bugs apart for many collectors is the so-called "T-bar" frame design cast integrally with the base. But McElroy was not the first to incorporate the device on a bug. Some years earlier a T-bar was used by the Electro Manufacturing Company on their Electro Bugs, where its narrow center post and dropped ends

made it a comfortable and convenient carrying handle (a use for which it was specifically designed). McElroy's T-bar was not intended as a carrying handle, nor can it comfortably be used as such. Fingers cannot be easily inserted between the bar and stop screws of the 1934 and 1935 models. And while one may be able to get his fingers under the bar of a later model, it is doubtful that Ted McElroy, with his "big fat fingers", could have done so. But the Mac-Key T-bar was functional—as a support so that the bug could be tipped on its left side and worked as a straight key. So that this could be done, McElroy incorporated a pendulum lock at the damper.

The dominant identifying characteristic of the 1934 model distinguishing it from the 1935 Mac-Key that followed is one of omission: There is no rigid, cast vertical support for the stationary dot contact. The contact is affixed to a diagonal steel bar that rises from the base of the dash contact support.

Take a look underneath any of the early Mac-Keys and you will see a lot of cast lettering. It indicates that McElroy applied for a patent on his key improvements in 1934. That may be so, but no patent was ever issued to him for a telegraph key. Prominently displayed is the notation "9-34" which indicates, it may be assumed, that the design was completed in September of 1934. The collector should keep in mind that the 1934, 1935 and 1936 models all have this same cast date and (but for one abbreviation) the same wording. The base shown at **Fig. 11.3** is of a 1936 model; on the 1934 and early 1935 models there was no through-hole for the lower pivot screw, and the full abbreviation for "guaranteed" (GAD) was used.

The wording itself is telegrapher's shorthand for "semi-automatic telegraph and radio code transmitter/Mac-Key/manufactured, adjusted and guaranteed by/T.R. McElroy/world's fastest radio telegrapher/Boston Mass." By this time, remember, McElroy had lost the title to Joseph Chaplin. Later, after he regained the title, new nameplates would proclaim him the "World's *Champion* Radio Telegrapher."

The finish of the one piece cast iron base is black wrinkle paint. The nameplate is brass, and measures approximately 1 X 2½ inches. The dot (or main) lever is a brass casting; it has a separate, offset pivot that carries the dash lever (I call this McElroy's "type 1 pivot"). McElroy felt this suspension of the dash lever to be an "important" feature of the Mac-Key.

Tension for the dot lever is by a tension spring on the right side of the lever. The damper is simply a wheel on a cast post; the pendulum lock is a small metal tab on the post. Finally, the use of a single screw holding the paddles is purposeful: It allows the paddles to be adjusted to varying heights.

1935 Mac-Key

McElroy apparently considered the lack of rigidity at the fixed dot contact a design defect, because he almost immediately added a cast post at this location. The single diagonal bar then became two bars meeting at the frame in a Vee configuration (**Fig. 11.2**). On this model, the stationary contacts are carried at the ends of these bars; the contact adjusting screws push on the bars to vary the position of the contacts. So strongly did McElroy favor this improved model that he claimed to have "recalled and changed over about 100 keys" at no charge. But more likely, McElroy simply scrapped a few old ones in exchange for 1935 models.

Because of the new cast support for the dot adjusting screw, the nameplate was rotated 90° and became parallel to the sides of the base. During the run of the 1935 model, McElroy

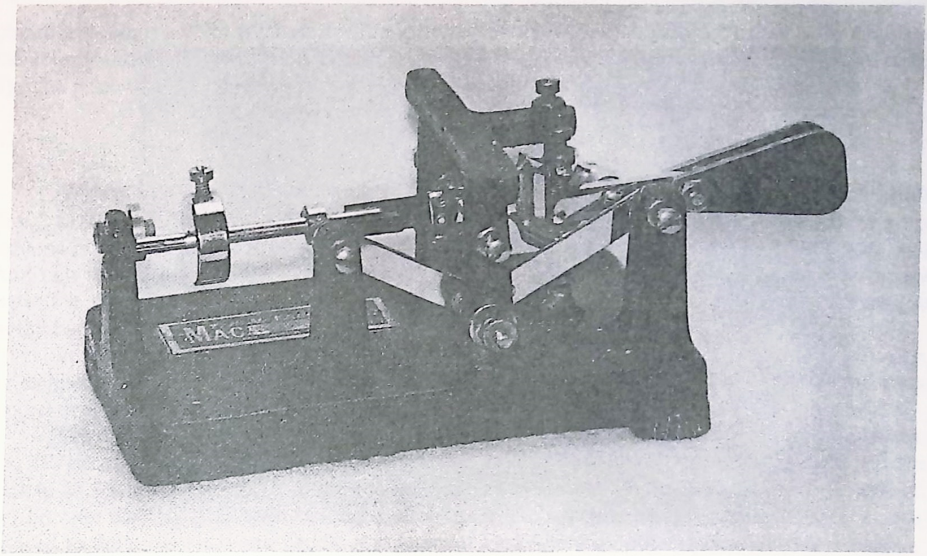


Fig. 11.2: 1935 Mac-Key (SN 5798). A late model with the pivot through-hole in the base and the GA abbreviation. The deep-Vee configuration of the contact connecting bars may be typical of a very late 1935 model; all others I have seen have lower serial numbers and a shallow Vee.

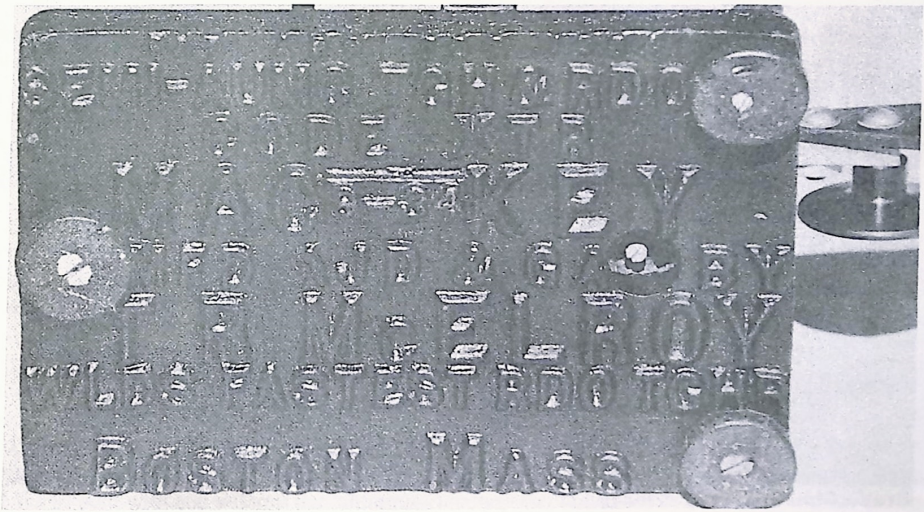


Fig. 11.3: Underbase of 1936 Mac Key.

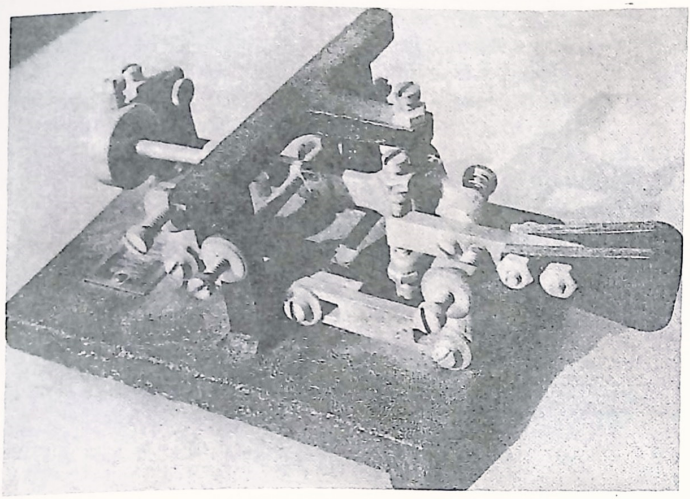


Fig. 11.4: Early 1936 Mac Key (SN 5089). Note L-shaped connector bars joined at center. (Joel Kosoff W3ZT collection.)

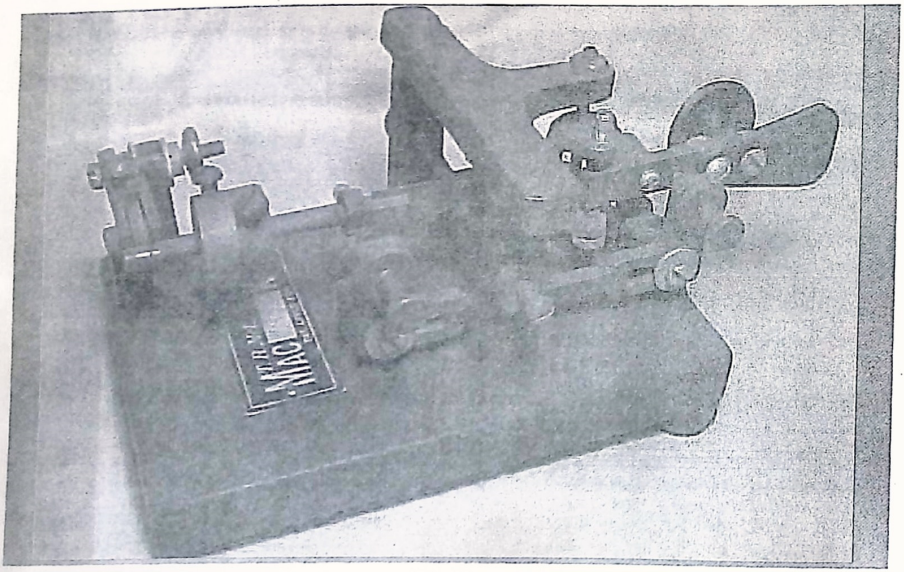


Fig. 11.5: Typical 1936 Mac Key (SN 5173) with U-bar. This early model has a brass nameplate and two paddles. The weights are both original.

placed a through-hole in the base for the lower pivot screw. The location of this hole required the abbreviation GAD (found on the 1934 and early 1935 models) to be shortened to GA (**Fig. 3**). The price of the Mac-Key remained unchanged from 1934: $10.50.

1936 Mac Key

With the 1936 model, which appeared in mid-1935, McElroy dropped the hyphen in "Mac Key." On the bug, three areas received major changes. First, the tall, cast contact supports were reduced in height to mere stubs. The two straight contact bars became L-shaped, and met at a third cast stub, **Fig. 11.4**. But almost immediately, McElroy replaced these two bars with one bar in the shape of an elongated "U", **Fig. 11.5**. Most importantly, the contacts are no longer on the bar(s), but are on the ends of the adjusting screws themselves.

Second, the frame was made thicker, making the key appear less spindly. And finally, the damper was completely redesigned, allowing the height of the wheel to be adjusted (and even flipped over to the right side). The pendulum lock is a wire clip affixed to the damper wheel.

The early version of this model retains the cast pivot of its predecessor and, for reasons that will become obvious momentarily, I call it a 1936A model Mac Key. McElroy dropped the price to $7.95. The very early 1936A bug continued the two-paddle feature of its predecessors, but, because they are held by two screws, they are not adjustable. In any event, this was soon changed to the usual knob-and-paddle arrangement long found on other manufacturer's bugs.

The 1936A retained the usual brass nameplate, then changed to an aluminum plate (see Appendix E). The 1936A is the most common cast iron Mac Key, and of these, the aluminum-plate version seems to be found slightly more often. Variations of the 1936A include the presence or absence of pigtail leads connecting the dot lever to the base (so that the ground connection would not be made through the pivots).

An interesting option offered a pendulum extension. In this model, the end of the pendulum terminates in a 6-32 thread; with a tapped extension rod affixed, the weight could be placed beyond the damper for really slow dots.

Southpaw telegraphers weren't overlooked by McElroy. But making a left-handed Mac Key wasn't as easy as it was for the Vibroplex Company, which could simply drill a baseplate in a mirror-image pattern (or upside-down, as some like to say). McElroy's left-handed 1936 model bases were *cast* in a mirror image.

In an apparent effort to eliminate the brass casting and finishing operations required by the type 1 pivot while still retaining the offset feature of the dash lever, McElroy changed to a pivot assembled from steel bar stock. I call this the "type 2 pivot"; it retains the separate, offset dash lever pivot by means of a C-shaped third member riveted to the dot lever. (**Fig. 11.6**.) For now, the Mac Key still had the "excellent" suspension of the dash lever. This single change distinguishes the "1936B model" from the 1936A.

On late models of the 1936B, the stationary contact connecting bar (U-shaped bar) is thicker, about 0.215 inches compared to the 0.170-inch thick bar used on the earlier 1936 models. In the fall of 1936 McElroy offered an option: a "Special Model" having a circuit closer and Mac cord (cord with wedge) for landline telegraph operators at a price of $10.00. Otherwise, it was the same bug. A very late variation of the 1936B has wire terminals on the base. These are found both with and without the (aluminum) nameplate, but in either case (and unlike earlier

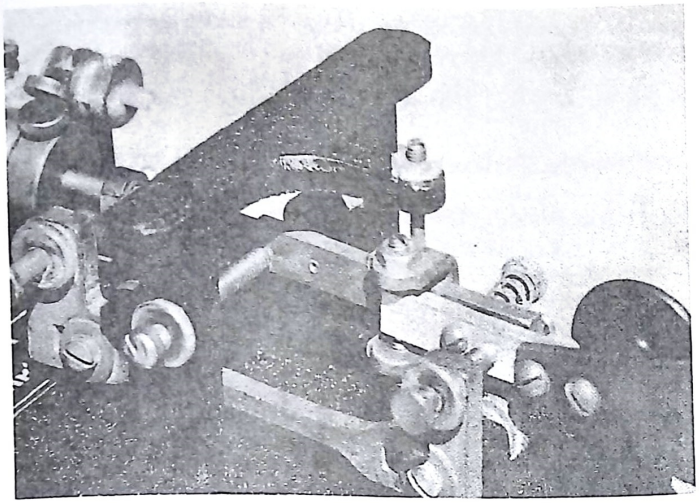


Fig. 11.6: Type 2 pivot on 1936 Mac Key (SN 7091).

1936 models) the plate mounting holes penetrate the base. The plate (when present) is mounted with a bent through-pin, as opposed to the earlier blind press-fit pin.

Junior Mac Key

At the same time that McElroy came out with the 1936 model (late 1935), he also offered an inexpensive ($4.95) bug incorporating the Mac Key main lever assembly and a stamped steel base and frame.

The early Junior uses the type 1 cast pivot assembly of the early Mac Keys, **Fig. 11.7**. The late Junior shown in **Fig. 11.8** has the bent-lug style pivot (type 3) first found on the 1938B Mac Keys. This follows the development of McElroy's other bugs, so the existence of a Junior with the intermediate style of lever (type 2, as on the 1936B through 1938A) is likely. The terminals on the Junior found their way from an inconvenient location at the left side of the frame on the early model, to the base on the later model. This, too follows the evolution of the full-size Mac Keys.

While McElroy's drawing of the Junior in his ads shows a nameplate that reads "Junior Mac Key" without a serial number, I am not aware of any Junior with a plate of any kind. However, the late model shown bears a very faint stamped or etched "Junior Mac Key" legend on the top of the frame. Because of the wrinkle paint, the key must be tilted against a light source to make the legend easily visible.

The Junior would still be offered in 1938, but it seems that throughout their life, very few people bought them. The Junior is a rare model.

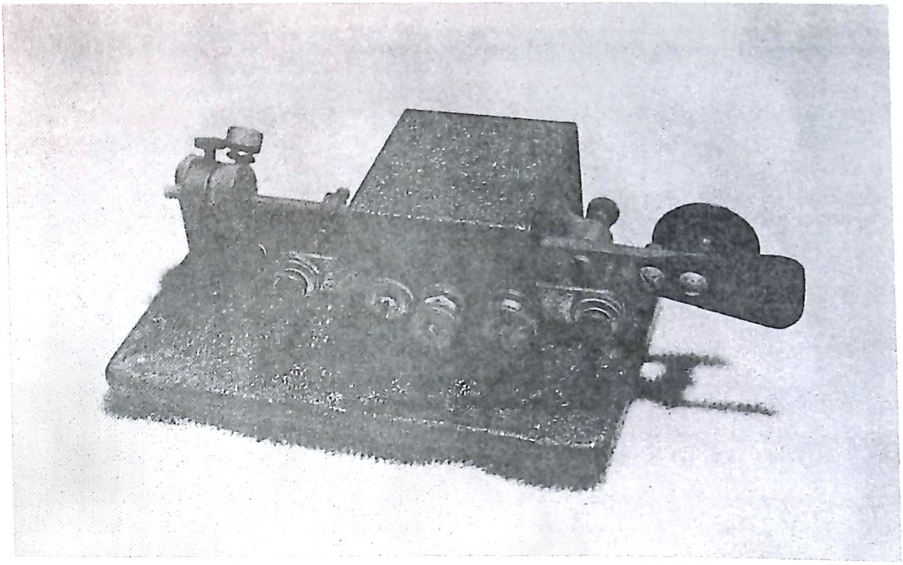


Fig. 11.7: Early Junior model. (Lynn Burlingame N7CFO collection/photo)

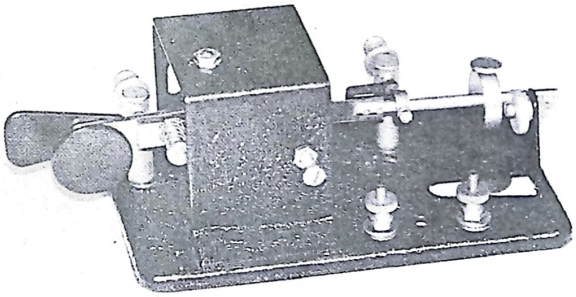


Fig. 11.8: Late Junior model with type 3 pivot and the wire terminals on the base. (Chuck Brydges W4WXZ collection/photo)

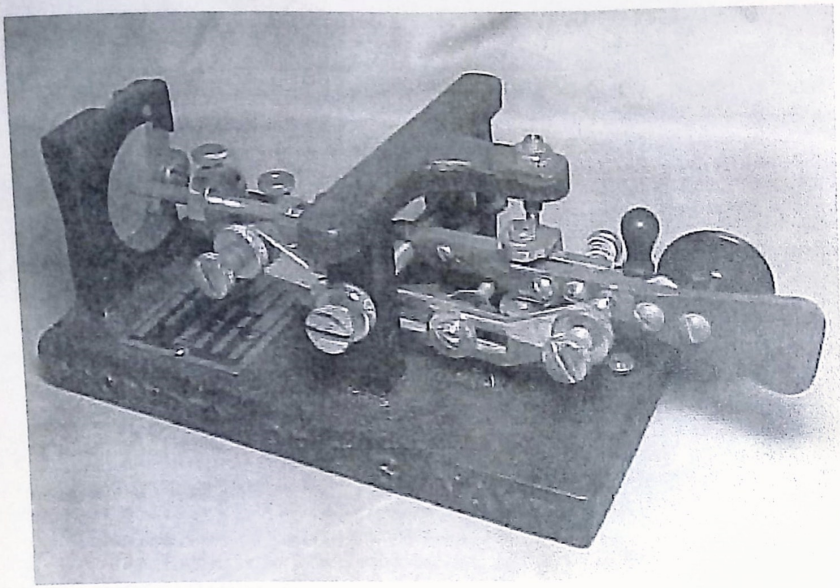


Fig. 11.9: Navy CMK-26009, "Property of U.S. Navy"

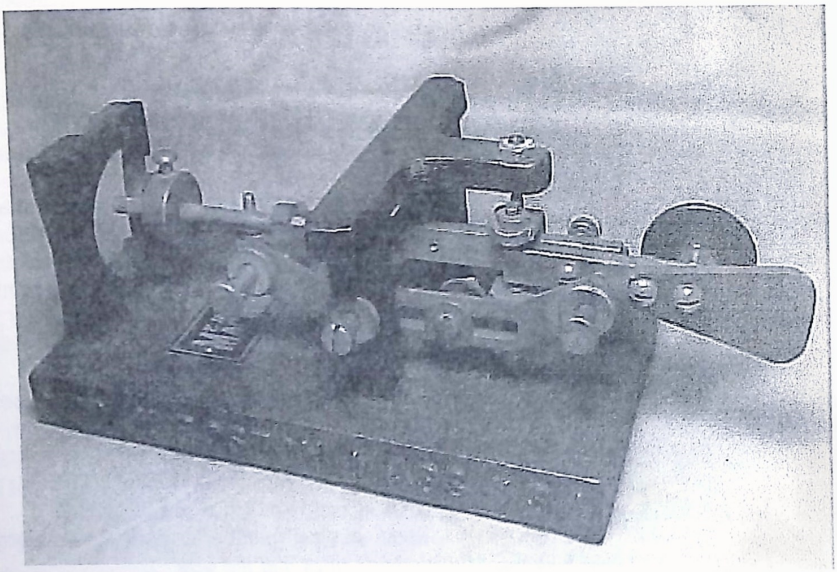


Fig. 11.10: 1937 civilian version, "MFD in Boston Mass USA"

Navy CMK-26009 and 1937 Mac Keys

In 1936, Ted McElroy was awarded a contract to provide speed keys to the Navy's Bureau of Engineering (see Chapter 5). This Mac Key carries the cast legend PROPERTY OF U.S. NAVY on its left side, and a special nameplate which reads "Manufactured for Navy Department, Bureau of Engineering, Theodore R. McElroy, Speed Key Model CMK-26009, Contract No. 47606, Serial No. xx". The serial numbering of these Navy bugs has its own sequence. Perhaps no more than 250 of these military speed keys were made by McElroy.

The CMK-26009 retains the type 2 pivot assembly of the 1936B and the base-mounted terminals found on the late 1936B, but several changes are incorporated. Its most obvious distinguishing feature is the big C-shaped damper support. The cast mounting stubs for the contact carrier bar have been moved closer together, cleaning up the base. This required the ends of the bar to be slanted outward at 45°. The cast wording on the bottom of the base is gone.

The Navy design became a commercial version (I call it the 1937 model) which, like some other Mac Keys, was never illustrated in an ad, **Fig. 11.9**. But McElroy did refer to it; his 1937 ARRL Handbook ad illustrates the 1936 Mac Key (with the same $7.95 price), but says, "Actually the ones I now ship are quite a lot better because when I had to make up special dies and jigs etc., to make extra special speed keys on an order from a certain government department (which, by the way, never purchased speed keys prior to my Mac Keys)—as I was saying, with these special tools, I was able to make an awful lot of improvements on the regular key."

The commercial model has the small aluminum nameplate. There are several variants, which differ only in the left-side wording. The most common has the cast lettering "PROPERTY OF" followed by a space on its left side (**Figs. 11.10**). The space is presumably for an operator to mark his name, call letters or sine. A close examination discloses that the words U.S. NAVY were simply ground off at the factory.

Later orders from the foundry eliminated the need for reworking the bases by deleting the entire PROPERTY OF... lettering; the left side is blank. Yet a third version has "MFD IN BOSTON MASS USA" cast onto the left side. The possibility of still other variants of the 1937 Mac Key will keep collectors alert.

1938 Mac Key

In mid-1937, McElroy introduced his "new 1938 Mac Key." It is very much like its 1937 predecessor but for a much-simplified damper assembly and a new, large nameplate. The cast lettering, whether on the bottom or the side, was gone for good. Serial numbers were started anew, this time with three digits.

The size of the nameplate, about 2½ X 3½ inches, allowed McElroy room to state that he was the "world's champion radio telegrapher." For the first time he uses his given name, Theodore, on his keys. Also for the first time, a true "deluxe" option was available. This included larger (1/4 X 32) adjustment and contact-carrying screws, a circuit closing switch and what McElroy called a "dot stabilizer," a pre-tensioning clip on the dot spring. It also included a "Marbleite" base finish. The price was $9.50.

In the Marbleite finish, a gloss black base was randomly oversprayed in a cream spatter or web design. It resulted in a faux marble look; this is particularly evident on the later keys

where, as his application technique improved, it resulted in a unique and beautiful finish. The Marbleite finish on the early 1938 models seems rather thin, and is not as nice as that found on the later ones; the 1939 and No. 600 Mac Keys show a great improvement. On some Deluxe keys, the overspray appears gray or green.

Oddly, McElroy didn't advertise the Standard model until six months after introducing the Deluxe 1938 model. The $7.50 Standard bug had a plain black wrinkle finish, no circuit closer or dot stabilizer, and smaller (3/32) contacts.

The first of the 1938 models (the "1938A" in my nomenclature) had the type 2 pivot, but McElroy soon changed to a simpler style of pivot assembly which would be used on all of his future bugs. This type 3 pivot, as I call it, was the common "bent lug" pivot used by all other bug manufacturers and introduced by Vibroplex in 1923. Tabs (or lugs) on the dash lever are bent over and under the main, or dot, lever so that a single, common pivot pin may carry both levers. **Fig. 11.11** shows this 1938B model (again, my designation). It marks the end of his "important, excellent" offset dash lever pivot.

At this time, McElroy probably found that the demand for left-handed bugs was too small to make a separate casting worth his while. But he'd still make a bug for a southpaw. On one example, to make room for the circuit closer he broke off the cast contact carrier mounting stubs from the base (*after* the marbleite finish had been applied!). Since the carrier could not be mounted on the other side of the lever (there were no cast stubs there), screwed-on posts were used to hold the contacts. The conversion looks as crude as it sounds.

1939

This was the last of the T-bar Mac Keys to have a numbered nameplate. The 1939 model, **Fig. 11.12**, is basically a 1938B with an improved base casting, and carried the same prices as the previous Standard and Deluxe models ($7.50 and $9.50).

The vertical risers supporting the top of the "T" were widened by a "hump" to the rear; this allowed room for a dot-lever spring adjustment screw on the left side, next to the lever stop screw. Dot lever tension was now, for the first time, by means of a compression spring.

In addition, the forward contact carrier mounting stub was attached to the left T-bar riser. Where the 1936 frame merely got rid of the spindly appearance of its predecessors, the 1939 changes give the effect of a sturdy, massive key.

Even though the deluxe option no longer included the dot stabilizer, the 1939 model with the Marbleite finish is, in my opinion, one of the two best-looking Mac Keys that McElroy ever made (the other is the S-600).

No. 500, 600

This last of McElroy's T-bar bugs appeared in 1940. It contains improvements—the pivots and pin are stainless steel—but it's basically a 1939 without the metal nameplate, **Fig. 11.13**. The prices had not changed. So that you can tell what it is and who made it, McElroy affixed two small decals. The one on the base tells you it's made by T.R. McElroy, while the one on top of the T-bar frame tells you whether it's a standard or deluxe model. The words "Mac Key" do not appear.

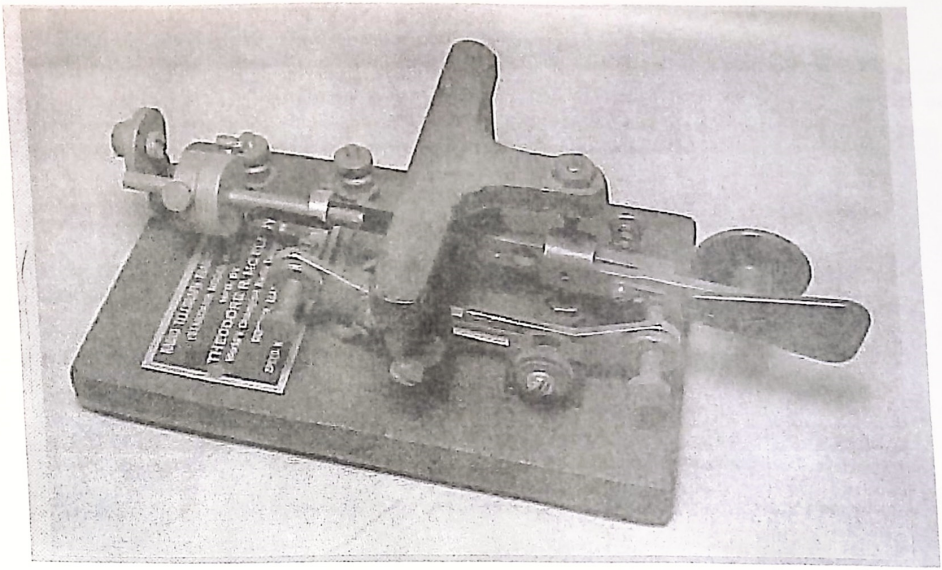


Fig. 11.11: 1938 Standard model with type 3 pivot (SN 5236).

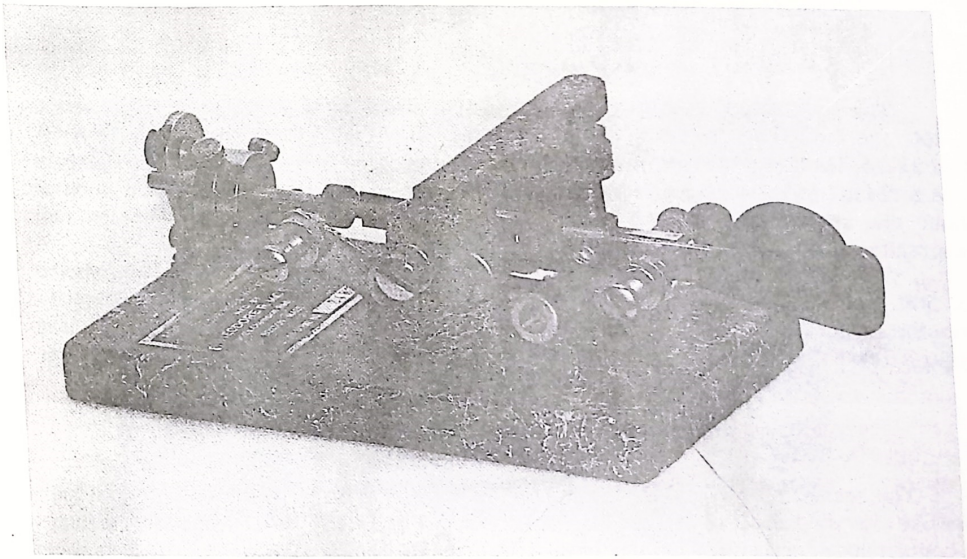


Fig. 11.12: 1939 model Mac Key in Deluxe Marbleite finish (SN 3487). Last of the T-bar Mac Keys to have a nameplate.

The no. 500 is the Standard model, with a black wrinkle finish. The no. 600 is the Deluxe, in Marbleite dress. If you don't mind the absence of the nameplate, it's just as pretty as the 1939. You might even think it's prettier, with the gold decals.

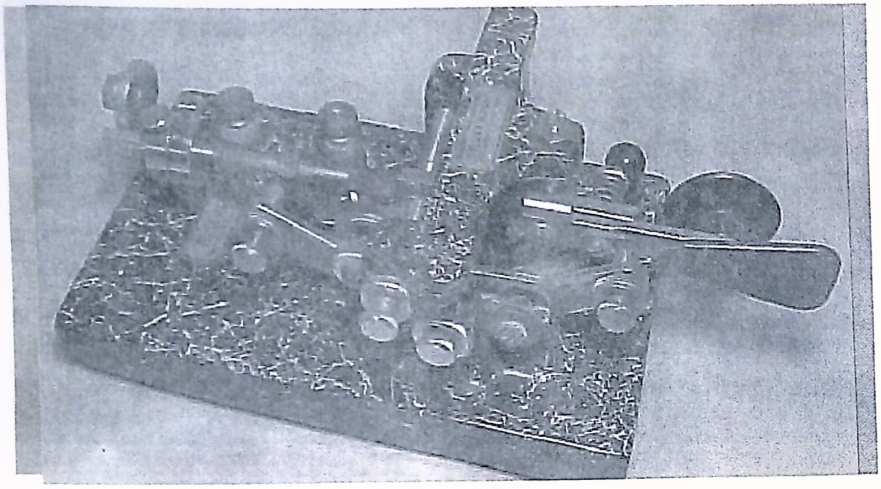


Fig. 11.13: Model 600. The decals tell the story.

A-400

The no. 500/600 model was replaced in 1941 with a three-key line-up. These were the A-400, the P-500 and the S-600, and would be the last of the McElroy bugs. With the A-400, **Fig. 11.14**, the last of the cast-iron bugs, McElroy dropped the price to $5.95. A new nameplate with a "Mac" logo on it appeared with these keys which said everything that needed to be said about the key and its maker: "Radio Telegraph Apparatus by world's champion radio telegrapher/T.R. McElroy/Boston, Mass. U.S.A." No serial number was used.

With its cast base, the A-400 "Amateur Model" is a close cousin to the 1939 standard or no. 500 models (black wrinkle finish, no circuit closer). However, it is easily differentiated from the earlier Mac Keys by its lack of tabs or ears on the horizontal bar of the frame; it is no longer a Tee-bar frame. Also, the A-400 uses posts, rather than a bar, to carry the fixed contacts.

P-500

The second 1941 bug was a departure in design for McElroy, which only made it look more like everyone else's keys. The $7.50 model P-500 (**Fig. 11.15**), with its separate cast frame and contact posts, was typical of other bugs of the time. Mechanically, its frame and levers were set up like a Vibroplex bug; McElroy called it the "Professional Model." The P-500 has the new

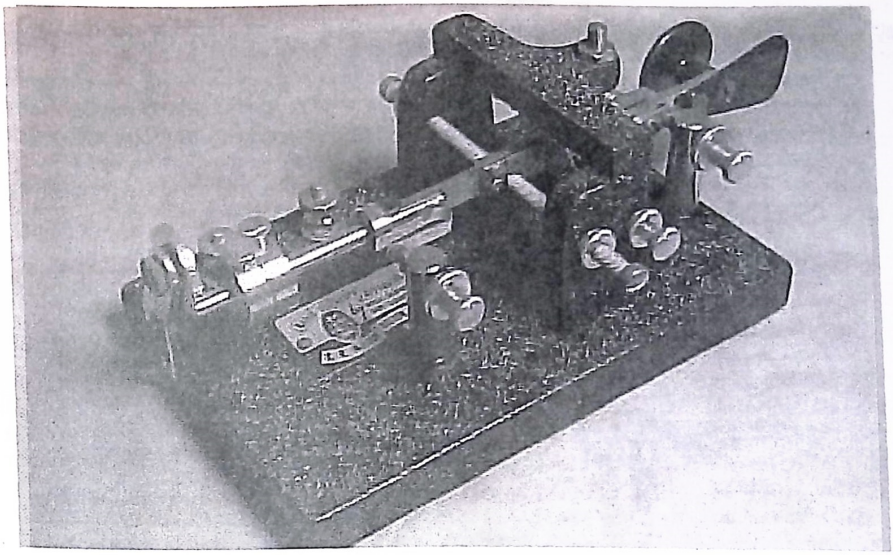


Fig. 11.14: Model A-400. A crude interim design between the 500/600 and the P-500.

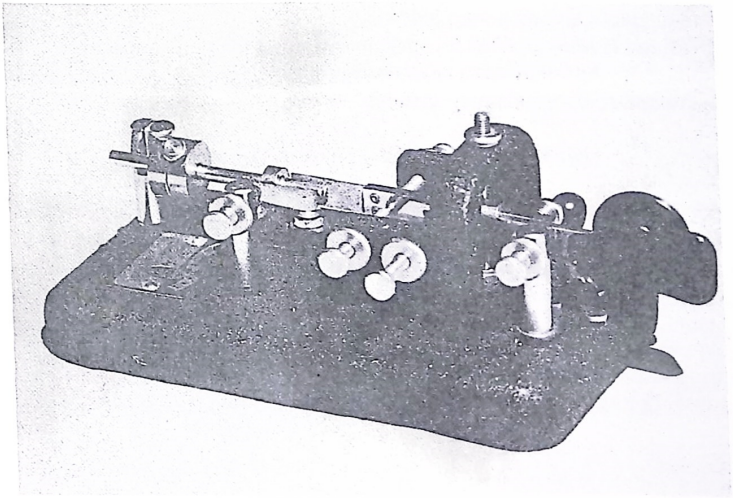


Fig. 11.15: With the P-500, all traces of the T-bar Mac Key disappeared.

"Mac" nameplate and a circuit closer. The base is finished in black wrinkle paint, as is the frame.

There are at least two variation of the P-500 which, with some confusion, were referred to as the CP-500 and the 500-742 models. Originally, the CP-500 had a black base and chromed frame, and came with a cord-and-wedge. By June of 1942, it was being finished with a gray base. The 500-742 first appeared in mid-1942 and in the ads looks like a re-named CP-500. There is no statement in the ads as to the base color or finish, but such keys with a chrome base have been found. The reader may draw his own conclusions.

S-600

Because the chrome-based 500-742 is not as well known as the famous S-600, it is the latter key that is held up as the example of the key that McElroy suggested he'd never make (**Fig. 11.16**). It is "very poor practice to have a chrome or nickel plated base on a key" he wrote in a March, 1938, flyer. McElroy must have remembered his earlier comment, for when he came out with the all-chrome "Super Stream-Speed" in 1941, he said that the chrome had a "bluish tinge to prevent glare."

But who can argue with the beautifully curved frame and teardrop-shaped base of the S-600? The frame is probably the simplest ever found on a bug. It does only what it's supposed to do: Support the pivot. Separate posts hold the main lever stop screws and tension spring. The S-600 has a circuit closer.

There are two models of the Super Stream-Speed: the S-600-PC with platinum contacts (offered at $11.85), and the S-600-SC with silver contacts ($9.50). There are also three variations; these concern the nameplate and the three operating-desk mounting holes in the base. One variation has both features; another has the plate but lacks the mounting holes; and the third lacks both the nameplate and mounting holes.

These variations seem deliberate, since those without the plate are also lacking the holes by which to mount it. And they may have been produced in the order stated, leading toward simplifying manufacture by eliminating features.

McElroy Electronics "Original Mac-Key"

In 1965, McElroy Electronics Corporation (John C. McElroy) announced that it would start producing two of Ted McElroy's keys, a straight key and the "Original Mac-Key" (John reinstated the hyphen). An illustrated brochure was prepared. The model used for the bug was a Standard model 1938B Mac Key that John had refinished in a "special McElroy gray" (gray hammertone) paint, **Fig. 11.17**. John used his father's 1938 description of the Deluxe model Mac Key, but deleted reference to the circuit closer and dot stabilizer.

The "Original Mac-Key" was offered, according to brochures and ads, for at least four years. The resurrected Mac Key would have sold for $57.50, but none were ever made.

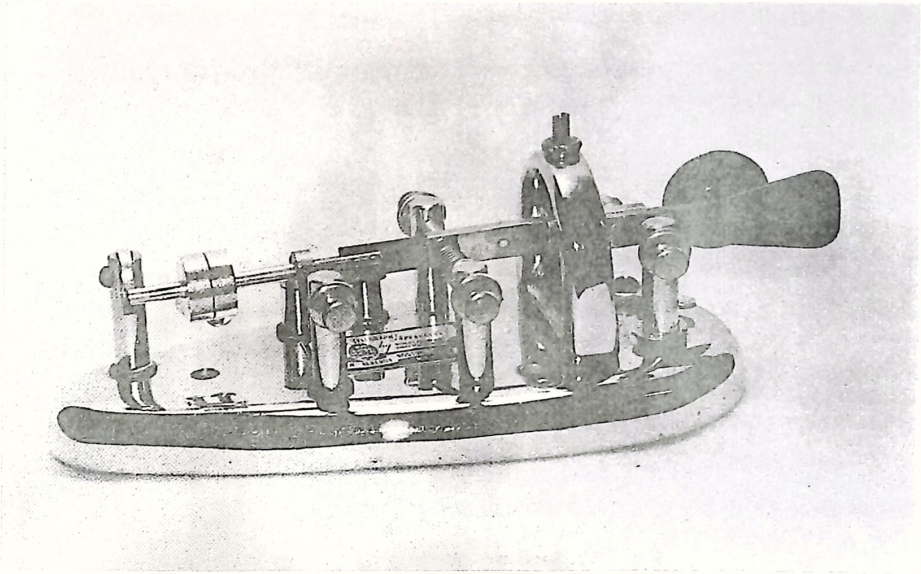


Fig. 11.16: The beautiful S-600 Super Stream-Speed.

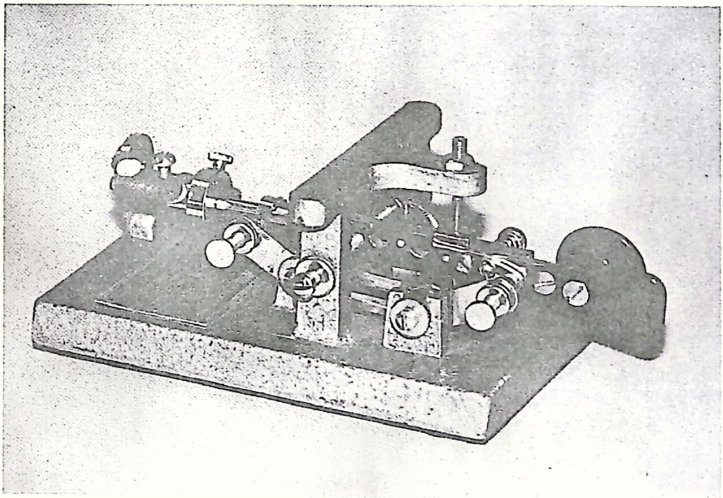


Fig. 11.17: The "last" Mac Key. John C. McElroy's gray 1938 model (SN 5517).

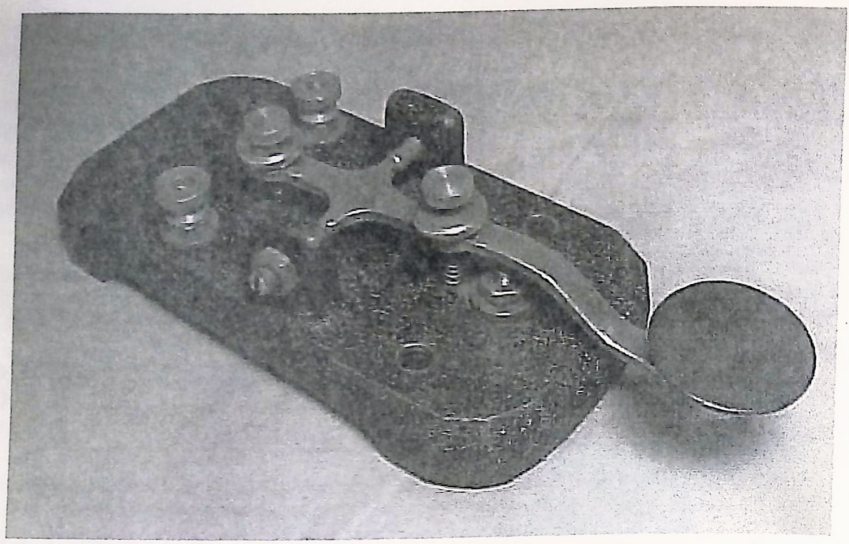


Fig. 12.1: McElroy cast-iron straight key

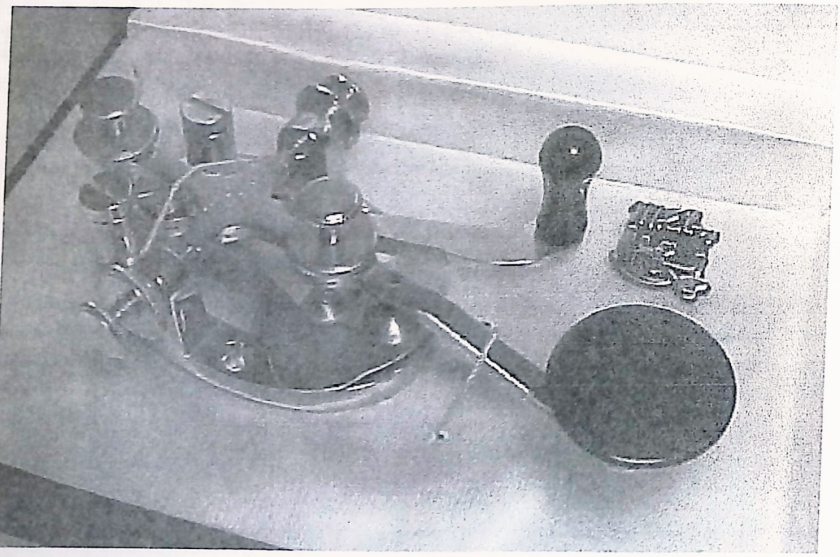


Fig. 12.2: "Professional Model Hand Key" (John McElroy's 1960s reproduction).

CHAPTER 12

McElroy Straight Keys

The straight key is the simplest and earliest form of telegraph key. It is often referred to as a "hand key." Disregarding, for the moment, the various options, finishes and frame materials, Ted McElroy made his commercial straight keys in only four basic designs. One of these designs—the second model Stream Key—is his most well-known straight key, and a "must" for any key collection. Ted's straight keys presented no problem in nomenclature, because they had distinctive names: straight key, hand key (in several models) and Stream Key (in two designs and several models). But it can still get a bit confusing. For example, the first Stream Key (1938) came in four models that had names but no numbers, while the later (1940) Stream Key came in three models with names identical to the first model but also having associated model numbers. And it must also be kept in mind that McElroy's "straight key" is not his "hand key."

Finally, the late McElroy Stream Keys and the straight keys sold by Telegraph Apparatus Company are often confused. That is understandable, because they are essentially the same keys, with minor differences.

Mac Straight Key

The "straight key," more often referred to as the "Mac straight key," appeared in 1937. It's a simple open-circuit key (that is, it has no circuit closing lever) with a heavy, cast iron rectangular base measuring 2 5/8 by 5 1/8 inches (**Fig. 12.1**). First offered at $2.50, McElroy quickly dropped the price to $1.50. The Straight Key was offered in one model only.

The Straight Key was sold alone or (at $2.95) with the "Hummer." This device, a 1000-cycle mechanical oscillator, mounted on three holes at the back of the base to make a practice set. The Hummer could also be purchased separately for $1.50; it operated from two 1 1/2 volt dry cells.

Hand Key

Ted McElroy's "Hand Key" is the typical, legless telegraph key much like the Signal Corps J-30, Bunnell's "Triumph" model, the Western Union model 2A and the Navy 26001. I believe these keys were not marked with McElroy's name; I have never seen such a hand key I could unequivocally ascribe to McElroy. To illustrate this key, I show at **Fig. 12.2** a Western Electric AT&T model 1A key which closely resembles Ted McElroy's Professional model.

McElroy offered his Hand Key starting in mid-1938 in four models. The DeLuxe model had a chrome plated cast brass frame. The Professional had a polished and lacquered brass frame. The Commercial had a black wrinkle finished frame and a chromed lever. The Amateur, the cheapest model, had a black wrinkle frame and a cadmium plated lever. Prices ranged from

$1.20 to $2.25.

McElroy doesn't mention the circuit closer in his flyer describing these keys, but at least the two higher-priced models were closed-circuit keys. All four models used the same 3/16-inch contacts, which were made for McElroy by Wilson, a New Jersey company.

Within six months, he discontinued advertising his Hand Keys.

Stream Key (First model)

The first Stream Key appeared in 1938 and is, in my opinion, the prettiest straight key ever made; Ted McElroy himself described it just that way. This is the only McElroy straight key that has a nameplate. **(Fig. 12.3)**

The four models carried the same names and corresponding finishes as the Hand Keys, above. The prices were the same: 1.20 for the cheapest model, rising to $2.25 for the DeLuxe. The DeLuxe (chrome-plated) model is much more common that the others. For some reason, McElroy mounted the circuit-closing lever "backwards" on all of his Stream Keys. That is, it curves toward the main lever, rather than away as on everyone else's hand keys.

Stream Key (Second model)

In 1940, McElroy proclaimed that his new model was "even prettier than my original Stream Key of last year". Although I disagree, it seems to be the Stream Key everyone wants,

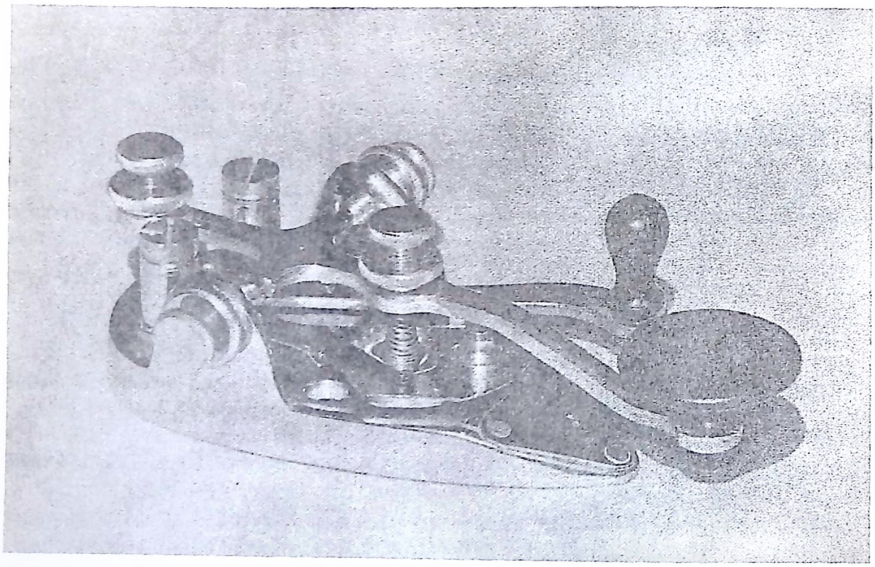


Fig. 12.3: First (1938) Stream Key had flat teardrop shape, nameplate.

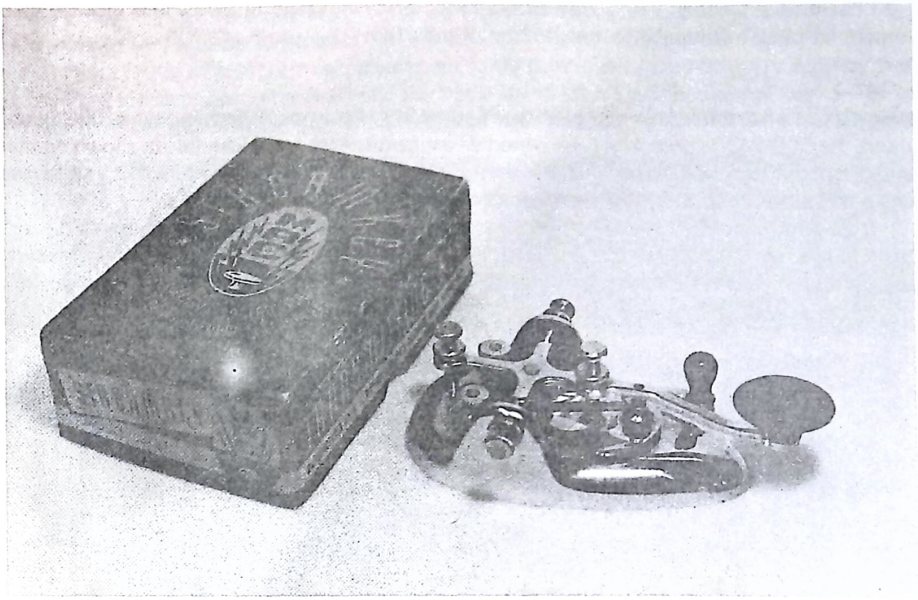


Fig. 12.4: Second Stream Key was more rounded, nameplate was deleted. Wire terminal style indicates this one is of late manufacture (about 1942). Original cardboard carton is black and yellow, measures 3¾ X 5¾ X 2" high.

perhaps because it's the only one they're familiar with. (**Fig. 12.4**) The variations were reduced to three and also given numbers: the Deluxe #300 (chrome), the Professional #200 (black base, chromed lever), and the "slightly smaller" Amateur #100 (black base, cadmium plated lever).

The price disparity for these three models was greater than for McElroy's previous straight keys: $1.00 to $2.85. And as a consequence, the cheaper models are as likely to be found as the Deluxe. (Yes, he changed the previous spelling of "DeLuxe.")

There are many varieties of this model. The metal base of the #200 was briefly replaced with grey or black plastic (your choice), as was that of the #100 (black plastic only). At this time, the #200 had a circuit closer while the #100 did not.

The following year the #200 returned to a metal, black wrinkle finished base, and two variations were added to the #300 and #200 lines. The "BB" models have a single ball (a bearing) captive between the lever and each pivot screw. The "BS" models have bronze pivot screws.

The #100 retained the plastic base and regained the circuit closer. While it doesn't show well in the photograph, the plastic model has what amounts to a nameplate cast into the plastic under the lever. This inexpensive key was also offered with the Oscillatone oscillator on a cast iron base as a practice set in 1941, **Fig. 12.5**.

The only change in 1941, apart from an increase in the prices of the various models, was an improved plastic composition for the base of the #100.

McElroy's last ad to offer keys was published in the 1943 *Handbook*. It featured the #200 Stream Key and the 500-742 "speed key." Hex-head adjustment screws and locknuts are shown on the Stream Key and in many places on the bug in place of the earlier knurled locknuts and screw heads, and knurled wire terminal nuts replace the cylindrical style of terminal.

The #300 and #200 would reappear two years later from Telegraph Apparatus Company in this final, lower-quality form. An identifying characteristic of the TAC straight keys seems to be the bulge in the lever where the contact (hammer) is located; see the Cut-Off Key, below.

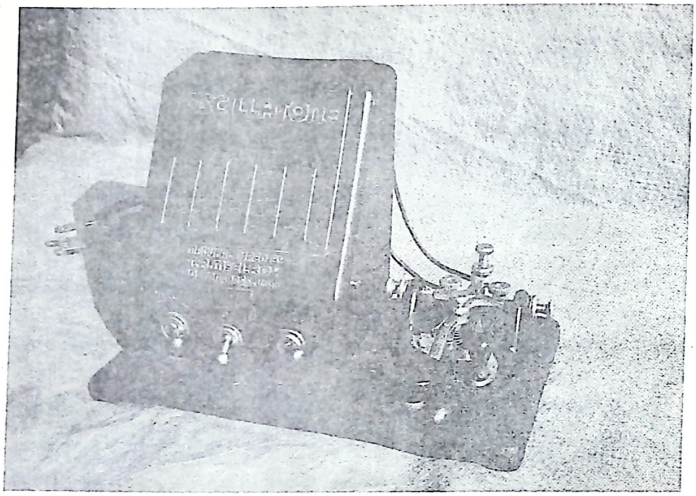


Fig. 12.5: Plastic model 100 key and Oscillatone on cast iron base make 1941 practice set. (Fred Linn W9NZF collection)

J-38

As a military equipment contractor before, during and after World War II, McElroy's company made and supplied EE-series code practice equipments (AN/FGC series trainers), so-called "school systems," to the Signal Corps. These systems incorporated the popular and ubiquitous J-38 practice key.

To my knowledge, Ted McElroy didn't identify his J-38 keys by marking them. John McElroy (McElroy Electronics Corporation) also supplied them to the U.S. military; these were for the most part also unmarked. John did tell me, however, that the specification for the key

required a black finish on the zinc base, which is a clue to identification. The J-38 shown in **Fig. 12.6** was made by McElroy Electronics.

In the 1960's, John McElroy supplied about 1,700 keys to the Army Security Agency that may have had his identification molded into the frame. In 1976, he supplied about fifty J-38s to the Saudi Arabia National Guard that were identified by a stamping on the circuit closer lever

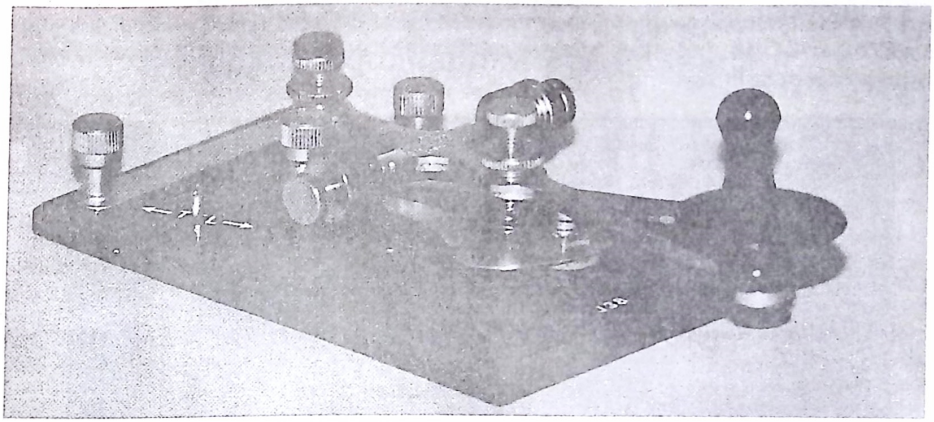


Fig. 12.6: J-38 by McElroy Electronics. (John C. McElroy collection)

as having been made by McElroy Electronics. (Special attention was paid to these keys, including polishing, in the hope of eliciting more business.) Upon fulfillment of this order, about 25 extra keys were made by McElroy Electronics with the lever stamp; these were given away as advertising and promotional gifts. His last contract, for about 100 keys, was in 1984.

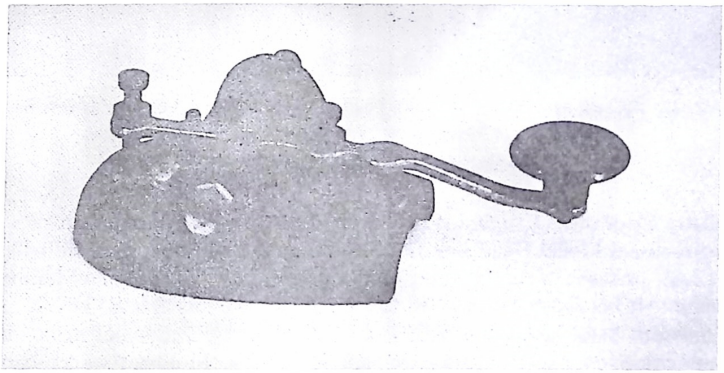


Fig. 12.7: Cut-off key by Telegraph Apparatus Co. for use inside oscillator.

Cut-Off Key

I include this key (**Fig. 12.7**) because it is a source of puzzlement for so many collectors of McElroy keys. However, it is not a "McElroy" key. This is the key that was hidden inside the Telegraph Apparatus Company models MS 700P (1945) and MS 710P (1946) "Oscillatone" code practice oscillators. (The bulge in the lever at the contact seems to identify the TAC straight keys.) Just the lever and knob of the key protruded out of the metal case. To accomplish this, a cut-off base was used on the key. McElroy's earlier Oscillatones, housed in plastic cases, never incorporated a built-in key.

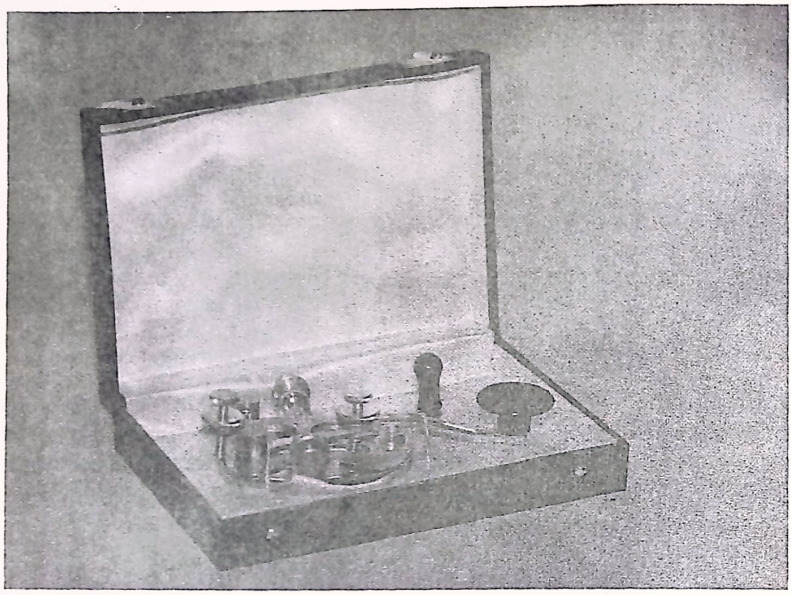


Fig. 12.8: McElroy Electronics "Professional Model Hand Key." (John C. McElroy collection)

Professional Model Hand Key

In 1965, McElroy Electronics Corporation announced that it would "again start producing Ted McElroy's Professional Model Hand Key...." The frame was of brass, overlaid with a chrome plating (**Fig. 12.8**). Because of the chrome plating, in describing the key John McElroy used the original language that his father had applied to the old DeLuxe model hand key.

These modern hand keys are identified by the McElroy Electronics name on the lever cross-arm. They came in a plastic jewelry box, and included a "McElroy" clutch-back key pin.

The price was $17.00; about 100 were sold. John was disappointed with the meager sales, and manufacture was discontinued.

APPENDIXES:

A. McElroy Automatic Morse Equipment

B. T.R. McElroy Chronology

C. The Codes: Continental and Morse

D. Contests and Demonstrations

E. Mac-Key Serial Numbers

F. Automatic Morse and Code Speed

G. McElroy's Speed Records: A Correction

NOTES AND REFERENCES

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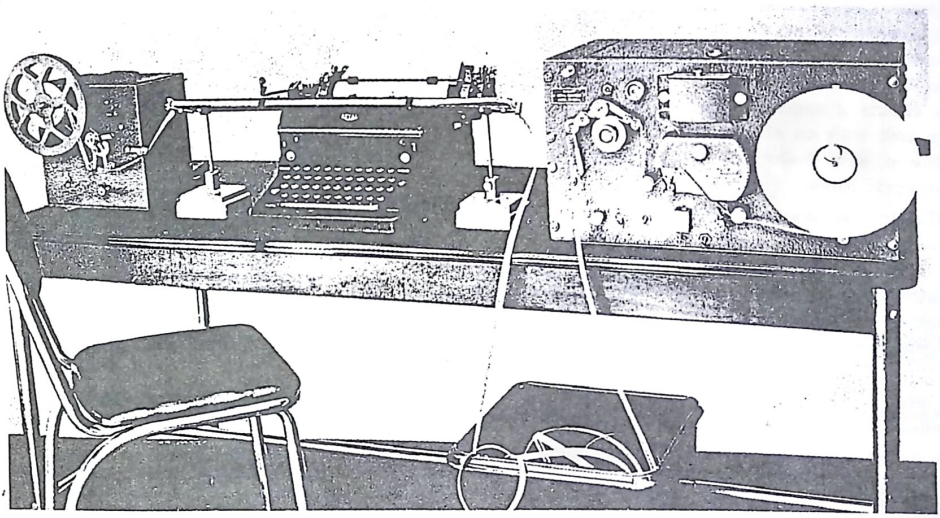
ABOUT THE AUTHOR

APPENDIX A

McElroy Automatic Morse Equipment

From the day he started making telegraph keys, one of Ted McElroy's goals was to make automatic Morse equipment. He was particularly interested in providing an inexpensive Morse transmitter for amateur and student code practice, as opposed to the complex and costly Wheatstone machines then available from companies such as Creed and Great Northern Telegraph.

This culminated in Ted's development of the "Mac Auto," a photo-electric inked-tape reader with relay output first illustrated in the 1937 *Handbook*. The Mac Auto was later called a Keying Unit, and was followed by other tape machines, including a Recorder for recording



McElroy automatic ink-slip type receiving assembly.

radiotelegraph signals onto a tape (model SR-900-A shown above right), and a Tape Puller (model TP-890-A shown above left). Soon, McElroy had a full line of inked-tape recording, transmitting and practice machines for sale. His line soon included Wheatstone machines, some of which were Creed or Boehme models repackaged or manufactured under license.

A few of McElroy's machines are shown in this appendix. These are taken from his June 1943 catalog (no. 643). As he did with his telegraph keys, McElroy continued to change and improve these devices over the years.

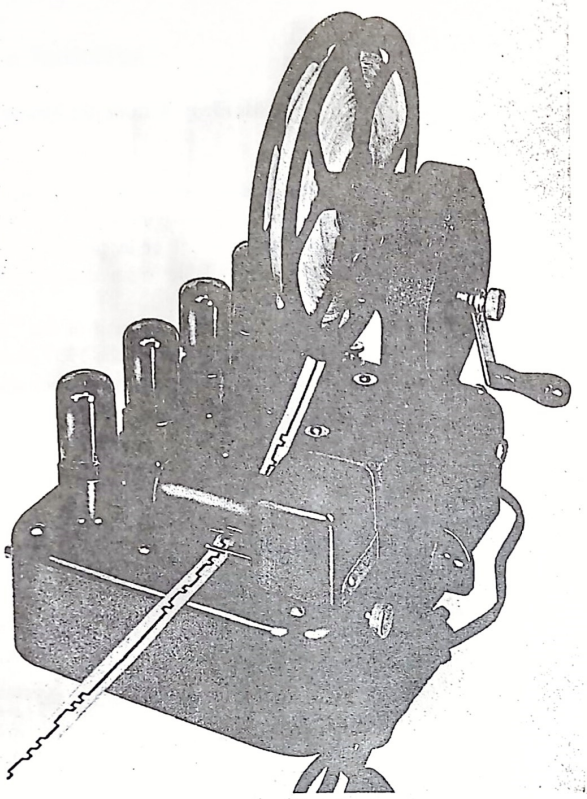
McElroy Electronic Keyer

Model G-813-A

The Electronic Keyer, an original McElroy development, converts into sound, code signals which have been transcribed in ink on standard 3/8 inch paper tape at any speed chosen by the operator. The clarity and even spacing with which the signals are reproduced will assist students in rapidly mastering correctly sent code.

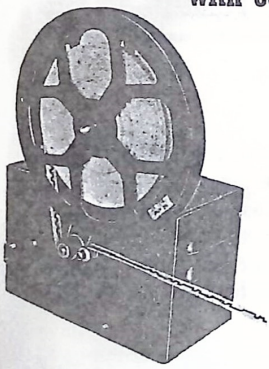
The Model G-813-A continues to be the only instrument of its kind which has the outstanding practical advantage of keying only the signal line of the tape. Speed control is constant to a maximum of 40 words per minute. Tapes which undergo the effects of excessive wear will operate this unit with an efficiency impossible to achieve with imitations of the McElroy Electronic Keyer.

Cumulative developments through years of experience with the photo keying unit, an original McElroy achievement, have resulted in many inherent advantages that continue to build widespread acceptance for this unit.

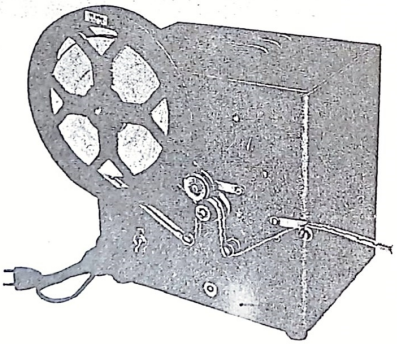


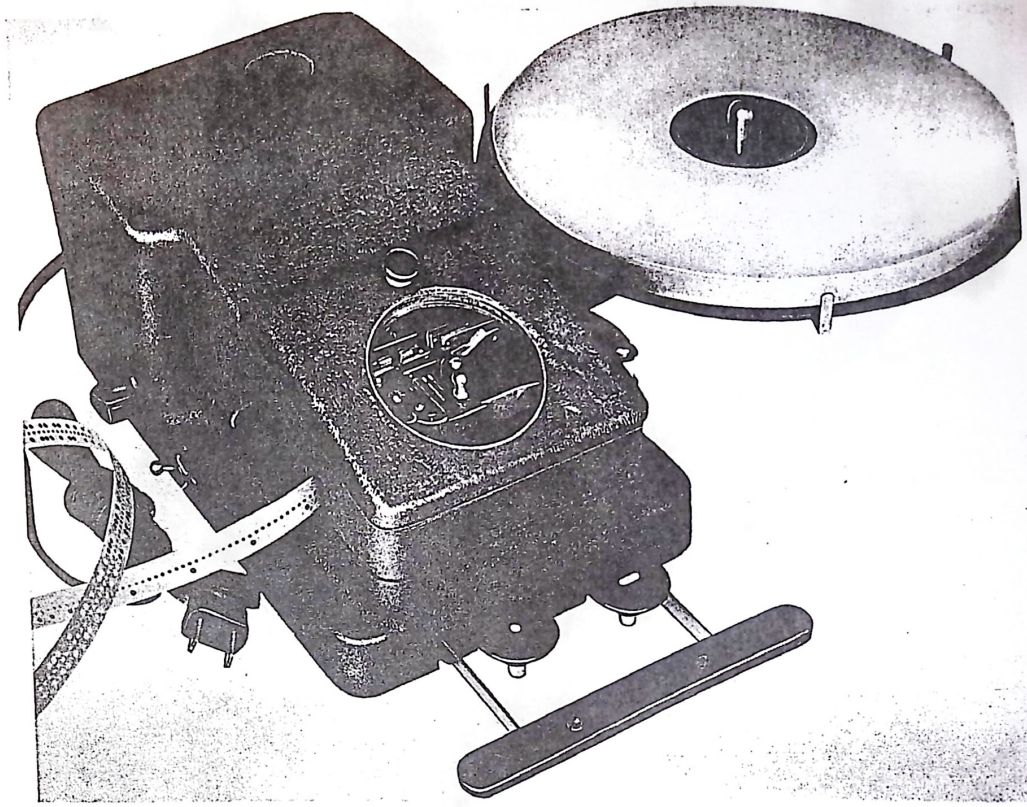
McElroy Tape Pullers, Model TP-845-A and Model TP-890-A

with constant control over wide speed ranges



By far the most important consideration in the planning of these units is the incorporation of newly designed motors, oversized and capable of sustaining constant speeds. Model TP-890-A (illustrated at the right) is recommended for high-speed applications, while the Model TP-845-A (at left) is principally used in conjunction with training equipment. Both will operate at maximum efficiency with a minimum of required maintenance.





McElroy PFR-443, Wheatstone Code Tape Perforator

Ted McElroy is justifiably proud of this remarkable unit. It assures perfect transmission of radio telegraph signals, thereby replacing inadequate hand-sending that often results in errors and repetition requests. Manual deficiencies contribute largely to unnecessary use of radio transmitters, with consequent congestion of the radio spectrum.

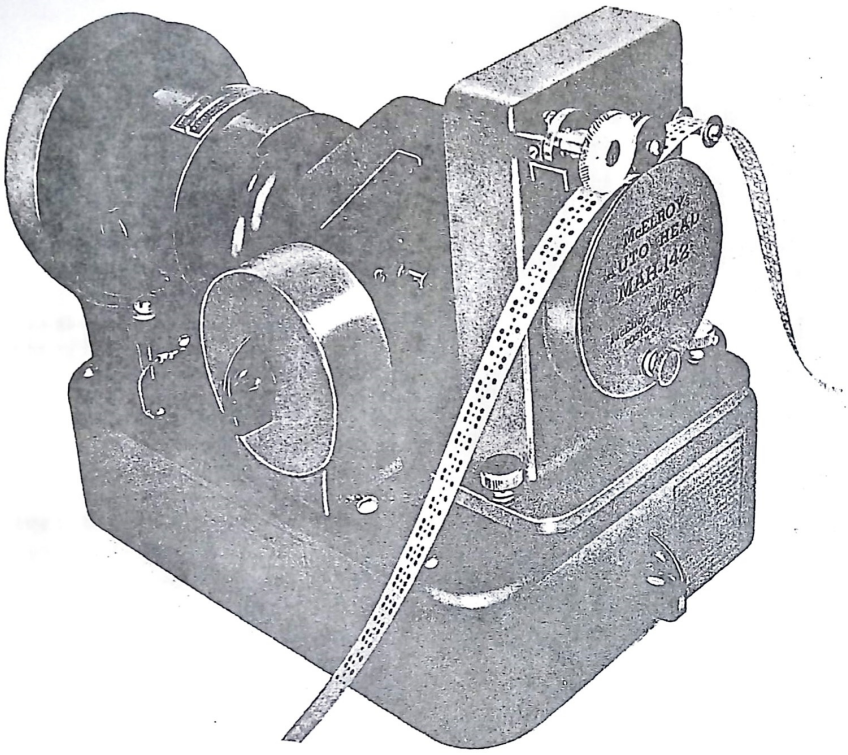
The Wheatstone Code Tape Perforator is unquestionably one of the outstanding contributions to the art of radio telegraphy. Actuated by 110 volt AC or DC current, this model PFR-443 prepares tape cleanly and accurately at speeds up to 50 words per minute, for feeding through automatic transmitters.

It does not necessarily require experienced radiomen to operate it effectively. Anyone with a basic knowledge of the dots and dashes comprising signal codes can prepare perfect tape for transmission, not only in International Morse, but in other codes used throughout the world, such as Japanese, Russian, Turkish, Arabic, Greek, etc.

The method of operation is simplicity itself. The unit is placed in a position similar to a hand telegraph key and may be operated with a feather-light touch of the index finger, middle finger and thumb of the right hand. Depressing the dot, dash or space closes electrical contacts actuating a powerful die mechanism.

This perforator may be used fully automatic, providing a continuous series of characters, and with a variable speed control—or may be operated semi-automatically to form only one character at a time.

This method of machine sending will prove of great value in improving the efficiency of radio communications on ships and at all other radio stations.



MODEL XTR-442 AUTOMATIC TRANSMITTER

The automatic transmitter performs the same function for Wheatstone tape that a keying unit (or keyer) performs for inked slip. That is, it opens and closes a keying circuit to create the dots and dashes on a line. The model 442 transmitter may be used to key an intermediate relay of a radiotelegraph station for communication purposes, or an audio oscillator for training purposes. The speed range of the XTR-442 is from 4 to 300 words per minute.

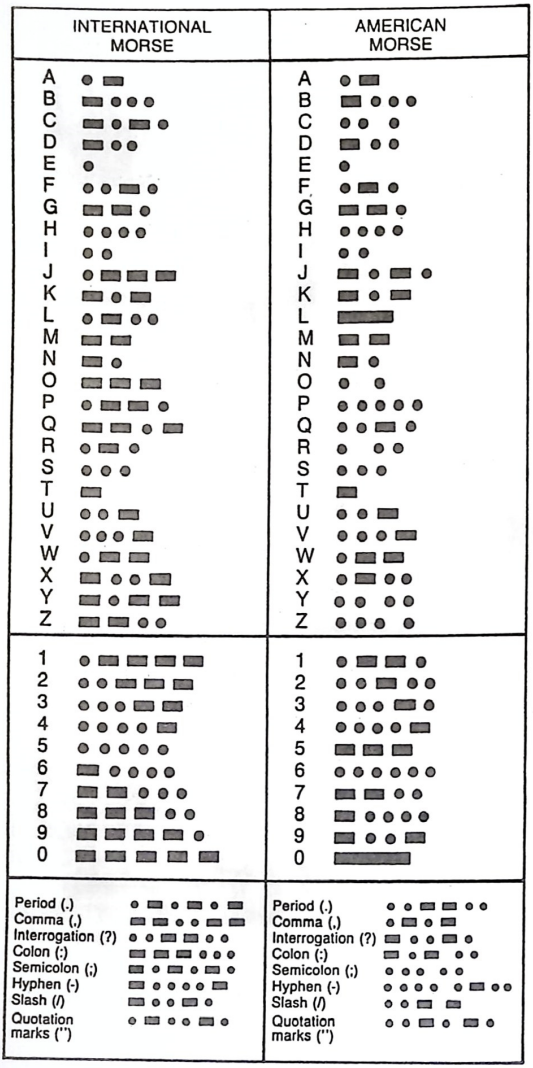
APPENDIX B

T.R. McElroy Chronology

1901 September 15	Theodore Roosevelt McElroy is born at Somerville, Mass.
1915	Starts as messenger boy for the Western Union, age 14.
1916 January 28	Graduates from Forster Grammar School, Somerville.
1916 February 1	He enrolls in the Commercial Course at Somerville High School.
1916 September 15	Turns 15 years old and becomes a telegrapher for The Western Union.
1916 November 24	His name is officially removed from the rolls in High School.
1920	Receives his commercial radio operator's license.
1922 May 6	Wins first radiotelegraph contest with a record at Boston Radio Exposition.
1922 May 24	He wins New York Radio Show radiotelegraph contest.
1922 August 6	Wins George E. Carlson trophy in contest at Chicago.
1925 October 26	McElroy and Margaret Frances Coleman, of South Boston, are married.
1926 November 11	Ted's and Margaret's only child, John C. McElroy, is born.
1933 August 5	Loses title to Joe Chaplin at Chicago World's Fair.
1934 September	Starts manufacturing Mac-Keys at home, 23 Bayside Street, Boston.
1935 March 11	Sets unofficial record of 77 WPM at Cape Cod Radio Club.
1935 September 14	Regains title, sets record of 69 WPM at the Brockton Fair Radio Show.
1937	Moves his business to 175 Congress Street, Boston (second floor).
1939 July 2	Wins Asheville ARC contest with record speed of 75.2 wpm.
1939	Moves his business to 100 Brookline Ave., Boston.
1941 December 3	Files incorporation papers for McElroy Manufacturing Corporation.
1942 February 21	Is given a Marconi Memorial Award for Code Proficiency by the VWOA.
1943 November 8	His workers are awarded the Army-Navy "E" Award.
1955 March 14	He sells his company; new owners change its name.
1963 November 12	T.R. McElroy dies at home at Littleton, Mass.
1964	He is named to Philadelphia's Morse Telegraph Hall of Fame by the MTC.

APPENDIX C

The Codes: Continental and Morse


INTERNATIONAL MORSE
AMERICAN MORSE
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
1 2 3 4 5 6 7 8 9 0
Period (.)
Comma (,)
Interrogation (?)
Colon (:)
Semicolon (;)
Hyphen (-)
Slash (/)
Quotation marks (")

The chart on the left illustrates the Continental or radiotelegraph code, also called International Morse. The chart on the right illustrates the Morse code used principally in landline work (railroad, The Western Union, etc.). The codes changed slightly over the years in timing and punctuation. In 1939, for example, the Continental signals for the period and the comma were changed. And sometime between the World Wars, the standard interval between words in Continental was increased from five time units to seven. The codes are shown here as they exist today.

The dots and dashes of the Continental code represent the relative time durations of tones, commonly sounded in speech as *dit* and *dah*. The elements of the Morse code represent relative time intervals between the pulling in and releasing of the sounder armature. Several Morse characters have internal spaces, a peculiarity that led to the creation of the Continental code. The Morse code is about twenty percent more time-efficient than Continental, which helps to explain the greater sending and receiving speeds which operators conversant in both codes were able to attain in Morse.

Although most don't realize it, today's radio amateurs still use American Morse when they send ES for "and" (*dit dididit*), actually the Morse "&", or when they send a long dash for zero.

APPENDIX D

Contests and Demonstrations

1922 May 6	Boston Radio Exposition	51.5 wpm [1]
1922 May 24	New York Radio Show	56.5 wpm
1922 Aug 2	Pageant of Progress, Chicago	56 wpm [2]
1933 Aug 5	Chicago World's Fair	Chaplin [3]
1935 Mar 11	Cape Cod Radio Club, Hyannis, Mass.	77 wpm [4]
1935 Sep 14	Brockton (Mass.) Fair	69 wpm
1938 Nov 16	World of Tomorrow Exhibition, Boston	75 wpm [5]
1939 Jul 2	Asheville (NC) Radio Club	75.2 wpm

notes:

1. The record (and title) was previously held by Jose Seron at 49.5 wpm.

2. Both McElroy and E.J. Nally appeared to believe that in this contest McElroy bettered his previous speeds; see main text and notes.

3. Chaplin's speed was 57.3 wpm, later changed to 54.1 (with 5 errors). McElroy came in second (54.1 with 8 errors). See Chapter 3.

4. A demonstration. See discussion of this speed at Appendix G.

5. Not an official contest.

APPENDIX E

Mac-Key Serial Numbers

Until 1979, Vibroplex serial numbers were assigned to keys sequentially with such consistency that the number may be used to determine the date of manufacture. The same cannot be said of Mac-Key serial numbers; one writer has said that it "was put on the label to assist the operator in identifying his key." The implication is that the number assignment was purely random.

Was it? Let's look at a listing of serial numbers arranged by plate style and model (year); the serial number units and tens digits have been dropped to eliminate unnecessary detail. From the list, we see that predicting something about a Mac-Key by its number alone is difficult. It's as though Ted occasionally pulled a handful of sequentially-numbered plates from a large box.

But there are definite, if brief, patterns. The series used in 1934 and '35 is not repeated in 1936. And the deluxe numbers are consistently lower than those for the standard in any model. McElroy's number assignment may have been arbitrary, but it wasn't purely random. Yet questions remain; note, for example, the aluminum plate 7600 series. Further study is warranted.

small brass plate

1934	5400
1935	5400
	5500
	5700
1936A	5000
	5100
	5200
	5300
	5800
	5900

small aluminum plate

1936A	6500
	6600
	6900
	7000
	7200
	7300
	7400
	7500
	7600
(1936A, cont'd)	7900
	8400
	8500
1936B	6600
	7000
	7600
	7700
1937	6700
	6900
	7200
	7500
	7600
	7800
	8200

large plate models

1938A deluxe	200
	1700
1938A standard	5200
1938B deluxe	400
	500
	1100
	1300
	1400
	1600
	1700
	2000
	2100
	3400
1938B standard	5100
	5200
	5500
	6100
	6200
	6300
1939 deluxe	3400
	3500
	3600
1939 standard	6400
	6700
	6800

A link to an updated list can be found at artifaxbooks.com/mcelroy.htm

APPENDIX F

Automatic Morse and Code Speed

In this appendix we will look at the Wheatstone Morse system and Continental code timing together, since the paper tape or slip used in the Wheatstone system gives a visual representation of the timing. We start with a bit of history.

Sir Charles Wheatstone (1802-1875) of England is probably best known among telegraph aficionados for his 1837 invention, together with his partner Sir William Cooke, of the five-needle telegraph system. But in 1858 he developed a high-speed Morse system; it was so successful that in 1868 he was knighted for its invention.

The Wheatstone system is a means of transmitting Morse code; because the method is automatic, it may be done at high speed. The system basically consists of running a punched paper tape through a keyer (reader) mechanism that controls a transmitter. The punched holes represent dots and dashes; the tape is approximately ½" wide. Types of punching mechanisms include the three-lever perforator, which has dot and dash buttons and a space bar, and the keyboard perforator. The latter resembles and ordinary typewriter; a plus is that the operator need not know the code.

A dot on the tape consists of two vertically aligned holes; a dash, of two diagonal code holes. A continuous central row of smaller sprocket drive holes is punched with each code element and space. One sprocket hole is skipped between letters, and three between words.

Once punched, the slip may be fed through the keyer. Its mechanism moves the tape at a constant speed under sensing pins called "pecker rods" which close a contact through the holes. The contact is brief for the vertically aligned dot holes; for a dash, contact is made on the top dash hole and broken at the trailing diagonal (bottom) dash hole. For radio transmission of the tape message, the keyer need only be connected to a transmitter.

The Code Standard

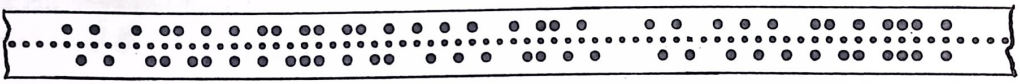
The timing of Continental code is based on an elementary time unit which defines the length of the shortest element, the dot. Since a dot (a "mark" condition) must be followed by a space, this elementary time unit is one-half of a complete dot keying cycle. (The technical term for a half-cycle is "baud.") For example, a series of five transmitted dots contains five full keying cycles, or ten elementary time units. The current code timing standard is:

dot is one unit
dash is three units
space between elements in a letter is one unit
space between letters of a word is three units
space between words is seven units

The time-length of a word is usually stated in such units ("KEY is a 36-unit word"), but it may also be expressed in terms of dot keying cycle equivalents; that is, the number of consecutive dots it would take the same time to transmit as the word in question. Since each transmitted dot requires two time units, KEY is an 18-dot word.

Wheatstone Tape Timing

The distance between consecutive dots punched on slip (or between sprocket holes, since each dot occupies one sprocket hole location) represents full keying cycles. The dot is therefore used as the basic element for describing word length in a Wheatstone environment. Thus MORSE is said to be a "25 dot word," or it "has 25 dots."



In terms of code timing units (as opposed to Wheatstone dots), MORSE is a 50-unit word. This is because the spaces between the tape sprocket holes (as well as the holes themselves) take time to pass through the keyer. Consider the punched dash: Its two diagonal holes take up two sprocket holes on tape; adding the space between those two sprocket holes gives us the correct three-unit transmitted dash length.

The sprocket hole between letters also gives a three-unit timing space when the tape spaces before and after the hole are accounted for. Similarly, the three dots between words result in a transmitted seven-unit word space. Now you can see why the word TESTS that the Cape Cod Amateur Radio Club used to first check McElroy's speed was said to be an "18-dot word."

Code Speed

The speed of transmitted code is stated in words per minute. Since the average American plain-text word has five letters, a student's progress in learning code is often figured by dividing five into the number of letters transmitted in a minute. But because some letters take longer to send than others, this method is not precise enough for formal contest reckoning.

Today, with computer-generated Continental, the actual code timing units (or baud) generated during a speed test can be counted and speed determined with exactness. Before WWII, the speed of machine generated code was determined by running a "test word" through the machine for, say, one minute, and actually counting the number of times it is generated at a particular setting of the machine.

The length of the standard or test word has varied over the years; today the standard is 50 units (25 dots). PARIS is such a word. The letters total $11 + 5 + 7 + 3 + 5 = 31$ units; adding the spaces between letters (4 spaces at 3 units each = 12 units) and the space after the word (7) gives a total of 50 units for the word. Any 50-unit word, such as JOY (the fewest-letter 50-unit word in the English language, by the way), may also be used as a standard.

Since a word which is shorter (in terms of timing units) will run through a Wheatstone machine in less time than a long word, it is obvious that selecting a short word as a test word will result in a higher apparent speed setting for the machine than if a longer word were chosen. That's why McElroy's speed at Cape Cod was 90 wpm when the test word was TESTS and dropped to 77 wpm when the standard IN THE was used (see Appendix G). And it is why Ted McElroy's, and anyone else's, code speed records have to be looked at carefully. Things are not always what they seem.

APPENDIX G

McElroy's Speed Records: A Correction

On March 11, 1935, Ted McElroy was given a letter by the Cape Cod Radio Club attesting that he had copied 77 words per minute. This "remarkable telegraphic achievement" is well known to students of McElroy and of code speed accomplishments, and a barely legible photocopy of the club's "official statement" seems to be in all of their files. There are two unusual things about this record. The first is that we have a written statement of the speed standard used. The second is that, in spite of this statement, the speed of 77 wpm is accepted as a fact.

The statement indicates that the Club initially checked McElroy's speed with the 18-dot word TESTS and found it to be 90 wpm. (For a discussion of code and tape timing, see Appendix F.) Since they considered a 21-dot word to be standard, they computed his actual speed as 18/21 X 90 = 77 wpm.

The Club's use of a 21-dot standard was odd. Frank Borsody, W2AYN, Transocean Radio Operator/Technician for RCA Communications, considered a 24-dot word to be the standard in 1934. Six years after the Cape demonstration, a 24-dot word was still considered standard. Applying the 24-dot standard at the Cape would have given McElroy a speed of 67.5 wpm. Today's standard is the 25-dot word PARIS and, had that standard been used by the Cape Cod Radio Club, McElroy's demonstration would have yielded a speed of 64.8 wpm.

Having examined McElroy's Cape Cod speed, let's look at his next contest. Just six months later, at Brockton, McElroy copied 69 wpm; as discussed above, a 24-dot standard is likely. His corresponding 25-dot speed would be 24/25 X 69 = 66.2 wpm.

Finally, what of McElroy's greatest feat, the 1939 Asheville speed of 75.2 wpm? Here is a significant jump from 65 or 66 wpm. It may be argued that McElroy had four years in which to improve, and the era's usual 24 dot word standard was likely.

Fortunately, we have an answer: the Asheville standard, as stated in the Asheville Radio Club's newsletter *THE ARC* in reporting the famous event, and as stated by McElroy in his August, 1939, flyer, was a 24-dot word. Yes, correcting it to today's standard results in a lower speed. But the final figure is still phenomenal: 72.2 wpm.

If our supposition of the Brockton standard is correct, we can summarize McElroy's corrected records at these tests as follows:

Test	Official speed	Corrected (25-dot) speed
Cape Cod, 1935	77 wpm	64.8 wpm
Brockton, 1935	69 wpm	66.2 wpm
Asheville, 1939	75.2 wpm	72.2 wpm

Now the numbers make some sense. That peculiar Cape Cod accomplishment falls into line with McElroy's other records. In a way, this is more impressive: The Cape wasn't a fluke, it was typical McElroy. Not only was he fast, he was consistent. And we can see him continually improving, right to the time of his phenomenal Asheville record.

NOTES AND REFERENCES

In the main text of this book, I have woven short quotations into the text; longer quotes are set off by indentation. Since I feel that once a writer starts "correcting" quotations he invariably introduces errors of his own, I have consequently given all quotes without alteration or correction. Idiosyncracies and errors of fact, as well as typing and spelling errors, are reproduced as they appear in the original. Having forewarned you of this, I have therefore not used the advisory "sic" except in the rare instance where I thought the reader might be confused by its absence.

Students of McElroy should use caution when relying on his articles and ads, as well as the information circulated by Walter Candler. Candler's montages can be especially misleading as to the dates of events, since some include a date while containing material published after that date.

In addition to citing my sources and references, this section also includes my notes, comments and tangential material. Some of this, perhaps, might have been placed in the main text. Other material could have been omitted entirely without being missed by the unsuspecting reader. But if I thought it was informative, entertaining, instructive or interesting, it is here.

A McElroy Bibliography

In addition to testimonials he wrote for Candler (or, it has been suggested, were written for him), McElroy wrote at least seven published articles. There were the three-part *Radio* series, the 1935 *QST* article and the 1937 *Short Wave & Television* article listed below. (The bold-faced abbreviation is used when referring to an article.) There was also a contribution to the "Operating News" column in that November 1935 *QST* (p. 56) titled "Hints on Improving Keying" and an article in the May 1942 issue of *QST* (p. 66) titled "Good Morse is Easier."

Part I: T.R. McElroy, "How Telegraphers Are Made, Part I," *Radio*, January 1935, p. 17.
Part II: T.R. McElroy, "How Telegraphers Are Made, Part II," *Radio*, February 1935, p. 24.
Part III: T.R. McElroy, "T.R. McElroy's Chats, Part III," *Radio*, May 1935, p. 28. (Despite the title, this is Part III of the previous two parts.)
McElroy QST Nov 35: T.R. McElroy, "World Championship Radio Code Speed Tournament," *QST*, November 1935, p. 24.
Personal Advice: T.R. McElroy, W1JYN, "Personal Advice on Learning Code," *Short Wave & Television*, January 1937, p. 574.

Location of Sources

Newspaper and magazine articles are often accessible through major libraries. Although most of the letters and memoranda are in private collections and so not available to public inspection, copies of some of them have circulated among his fans for years. These, not surprisingly, usually concern McElroy's contest activities and telegraphic products.

Abbreviations

In addition to the McElroy articles listed above, the following references have been abbreviated for convenience.

Tape: Audio tape of a small gathering which included Ted McElroy, made on November 20 1959 at the home of Sy Saslow, WB2MEW, in Sarasota Springs, New York. Tape courtesy of Sy Saslow; re-recording courtesy of Jon French.
Nagler: Barney Nagler, "McElroy's Magic Madhouse," *Liberty*, August 5 1944, p. 30.
Coggeshall: I.S. Coggeshall, "When the World's Radio Speed Title Changed Hands," *QST*, November 1933, p. 39.
Handbook: *The Radio Amateur's Handbook*, various years (stated), published by the American Radio Relay League (Formerly at West Hartford, now at Newington, Conn.)

In the references that follow, "ref" indicates the source or reference for my statement. An unattributed "memo" refers to a business memo written by McElroy on the date indicated; most are dated after late 1957. Almost all of these are directed either to Ted's employers at Saratoga Industries in New York ("Saratoga") or to the named person (usually a buyer) at a company such as Raytheon or Sylvania in Massachusetts. A name standing alone, or followed

by a date, indicates I obtained the material during an interview of that person. Most information and quotes attributed to Margaret (Mrs. T.R.) McElroy came *via* John C. McElroy. The material from Hazel (Mrs. H. Reg) Adams came *via* Colin Waters, G3TSS.

Where there is more than one note for a section or chapter, I have numbered them for ease of future citation; these numbers do not appear in the main text.

McElroy Family Tree

Massachusetts Department of Public Health, Division of Vital Records; John C. McElroy; Thomas D. McElroy; other family members; unidentified clipping, December 7 1968.

Foreword

1. M'c-*el*-roy: The family tells me, however, that a few generations ago it was pronounced the other way, and at least some of the younger generation are thinking of reverting to it. "Ballymacgilroy": *Fermanagh, Ireland Antiquities*, by Michael O'Flanagan (Bray, Ire., 1928), p. 70.
2. McElroy's "nephew on Long Island" is Howard M. McElroy, KZ4P. The quote is from Ingram, *Keys, Keys, Keys* (CQ Communications, Inc., 1991).
3. "I type as fast": Memo to The Mitre Corporation, October 7 1963. "exactly the way": Thomas D. McElroy, May 24 1993. Ted's voice can in fact be heard on the recording of the broadcast of the 1943 "E" Award ceremony, Mutual Broadcasting System 78 rpm record set #4-9495.

Chapter 1

1. Second generation American: From information compiled by George H. McElroy (Ted's second cousin) and John W. McElroy (Ted's brother), 1978. McElroy referred to "my six or seven generations of Bostonese antecedency" in Part I, but he was incorrect. Additional information on McElroy's parents and birth (as well as later marriage and death) are from the relevant certificates on file at the Massachusetts Department of Public Health, Division of Vital Records, Boston. Ted and Margaret's marriage certificate lists Ted's mother's maiden name as "O'Grady," while his birth certificate gives it as "Grady."
2. President McKinley was shot on September 6 by anarchist Leo Czolgosz while attending the Pan-American Exposition at Buffalo.
3. Cowboy president: "Now look, that damned cowboy is president of the United States," complained Mark Hanna, mastermind of McKinley's 1896 election, ref *Family Encyclopedia of American History* (Reader's Digest Association, Inc., 1975).
4. McElroy did not care for the name: His nickname was "Teddy," ref *Boston Globe*, November 17 1938 (evening ed.) "McElroy does not favor his middle and given names" and is quoted as saying "call me Teddy," ref *Boston Globe*, January 18 1948. "Ted...detests his given and middle name," ref *Boston Post*, March 12 1944. "he's Ted to everyone," ref Nagler.
5. Halligan, born in 1899, ref "The HT-4 Goes to War" published by the Hallicrafters Co, was the founder of the Hallicrafters Company. He held amateur call 1AEH in 1914 (*Worldradio*, October 1992), and would later hold amateur calls 1UL (*QST* February 1936, p. 5), W9WZE (*Handbook*, 1946, p. 179) and W4AK (*Electric Radio*, August 1992, p. 3). He died on July 14 1992.
6. McElroy's poverty and quotations thereon: Tape.
7. Sold newspapers: Morse Telegraph Club application, April 11 1963. (The reason he filled out this form is unknown, since he had been a life member of the Morse Telegraph Club of America, predecessor to the MTC, since 1954. He did not, however, file the completed form with the Club.)
8. Description of Forster: Clipping, source unknown, courtesy of Diane Barry, Reference Department, Somerville Public Library, to author, June 25 1992.
9. Education: McElroy to Somerville High School, February 2 1951. Albert H. Giroux, Headmaster, Somerville High School, to McElroy, February 7 1951. Kim Rice, Secretary, Somerville Public Schools, to author, June 4 1992. Boston *Herald*, November 13 1963. In a letter accompanying his 1960 political brochure dated November 1 1960, he correctly stated the date of his graduation from Forster and said, "I'm looking at the Diploma on the wall as I sit here typing." The educational progression was from grammar school to high school; there was

no junior high (middle, or intermediate) school as we have today.

10. Typing: He "learned typing in the seventh grade, and became so swift at it that he gave typing demonstrations," Ted Ashby column, *Boston Globe*, April 1 1963, afternoon edition. He had "learned to type in the 7'th grade Forst Grammer School...," MTC application dated April 11 1963.

11. "They threw me out": Part I. If he was in fact thrown out of school, it was from Somerville High School and not Forster Grammar School.

12. "I Don't tell no lies": Tape.

13. 49 Montrose Street address: School census card, November 10 1915. Description of neighborhood: Vincent Cronin, June 11 1992. According to Cronin, McElroy's mother was working as a nurse at this time.

14. Gilman Square: Vincent Cronin, June 11 1992.

15. "Those were the happy days": Part I. "they was farmers": Tape.

16. The Western Union wouldn't hire him: "It was against the law, you couldn't be a regular legitimate telegraph operator 'til you were fifteen", ref Tape.

17. "What are you gonna do?": Tape.

18. "A few months on the streets": Part I.

19. "the various stages": Part I. Woods, ways and trunks is the progression in terms of the size and business handled by a telegraph office. The corresponding progression for railroad operators is country, way and terminal stations. Bonus was a form of piece-work whereby an operator, after he had completed his daily quota, was paid for each additional message. According to Dr. E. Stuart Davis ("The Quest for Ease and Speed," *Brass Pounder's Gossip*, March-April 1974), the plan was "diabolically clever" because the companies had cut the base wage rate when they introduced bonus.

20. Medford and Chelsea: *Boston Post*, March 12 1944. MTC application, April 11 1963.

21. Keene: John C. McElroy.

22. "Good Morse operators": Memo to Saratoga, May 26 1960.

23. Morris & Co.: MTC application, April 11 1963.

24. Camp Devens: Part I. McElroy was a civilian telegraph operator while at Camp Devens; he was never in the armed forces, ref death certificate. The national army cantonment of Camp Devens was built in 1917. It was named for a local man, Charles Devens, a Brevet General during the Civil War. Camp Devens was placed on inactive status after WWI; in 1931 it was declared a permanent installation and redesignated Fort Devens. Ref Davis Library (Fort Devens) historical file. Fort Devens will officially close on October 1 1995.

25. Ordinary seaman: McElroy to American Radio Association, C.I.O., June 25 1953.

26. Wireless operator: Memo to Saratoga, February 26 1958; memo to Saratoga, August 31 1960; memo to Joe Mahoney, Raytheon, September 17 1963; memo to Elmer Westlund, Raytheon, September 17 1963. "Press a button": McElroy to American Radio Association, C.I.O., June 25 1953. "Public Health Service": Memo to Bob Deveney, Raytheon, May 21 1963. He may well have used the Morse code on the wireless, which was not uncommon in those early days of radio.

27. WSO: Strictly speaking, WSO was one of two RCA Alexanderson alternators (transmitters) located at Marion, Massachusetts, on the mainland side of the Cape Cod Canal. (The other alternator at Marion was WRQ.) WSO was keyed from Chatham, where the transoceanic receiving station was located, and so WSO was commonly referred to as being at Chatham. Ref contemporary callbooks and radio maps. Alan Douglas to author, received July 2 1993. For additional information on Alexanderson alternators see "The Alexanderson System for Electro-Mechanical Production of Radio-Frequency Energy" by Glen C. Fuller, N2EXL, *The AWA Review*, Vol. 3 (1988), a highly technical and well-illustrated article on the development, design and operation of the Alexanderson alternator; this article shows a portion of the Marion alternators at Fig. 12. Also see "The Alexanderson Alternator" by Frank Roddy, K3SE, *Morsum Magnificat*, No. 28 (June 1993).

28. At WSO: "I hopped a train for the Cape": Part I. Borsody, Berlin circuit: Borsody to Bill Eitel, WA7LRU, January 17 1975; Borsody wrote that he went to RCAC Transoceanic in 1925 where he worked with McElroy, which presents a timing conflict in the available evidence. Borsody would hold amateur call W2AYN; his last call was K4EC. Commercial operator's license: He received it "about 38 years ago" he said in a memo to Francis Smith, Raytheon, April 17 1958. Wore headphones; Alexanderson alternator; "copper wire circuit": McElroy to Phil Hunt, January 31 1960 (the correct spelling is "Stavanger"). "seemed much more sensible": VWOA *Yearbook*,

1942. The Morse characters C, O, R, Y, Z, and & are composed of dots and inter-element spaces. (To an amateur radio operator used to Continental, this results in the Morse "&" sounding like "E S.")

29. "the beginning of the end": Part I.

30. Union organizing: Part I. Memo to employees, November 30 1951. In the memo he says he was fired in 1922, but that leaves little time for booming before returning to the Western Union.

31. "On the dot 8 A.M.": Memo to Ray Bridge, Sanders Associates, July 16 1962.

32. "When you work as a telegraph operator": Notice to employees, March 30 1951.

33. "So I returned": Part I.

34. Sine VA: *Boston Globe*, May 8 1922.

Chapter 2

1. Boston contest: Mechanic's Hall: *Boston Globe*, May 8 1922. "excuse to geta night off" and following quote: Part I. Description of contest; the next day: *Boston Globe*, May 8 1922. Vetromile McElroy's cousin: Roger Dodd, W1CMW, to McElroy, on a QSL card postmarked April 10 1963, refers to Vetromile as "your cousin". John C. McElroy said Vetromile was "a relative." Vetromile with *Globe*: McElroy to *Globe*, April 11 1963. McElroy's trophies are in the McElroy family collection.

2. "real speed should be measured...": Howard McElroy, KZ4P, to author, January 19 1992.

3. Phillips Code: A telegraphic shorthand for the rapid transmission of press matter originally designed by Walter P. Phillips in 1879.

4. "one...after another": McElroy *QST* Nov 1935.

5. New York contest: Part I. McElroy *QST* Nov 35. May 24: telegram, E.J. Nally to George E. Carlson, August 9 1922. One error: Coggeshall. Coggeshall refers to "McElroy's record which for 11 years had stood at 56.5 w.p.m." Based on the trophy engravings, this may mean the New York, rather than the Chicago, contest; see discussion of McElroy's Chicago speed which follows in the main text. The American Waltham Watch Co. pocket watch was a Wadsworth model, and is in the McElroy family collection.

6. Chicago contest: *Chicago Evening American*, August 2 1922. "In this connection": T.R. McElroy, "Learn to Handle Code," 1936 Candler montage. Wheatstone automatic, see appendix F. "since proven its worth": Part I. The Carlson medal is dated August 2, while the *Evening American* says that McElroy "will be an entrant in the...contest...at municipal Pier Sunday" (August 6). Since McElroy was in Chicago on August 2 (his photograph was taken by an *Evening American* photographer), I attribute the conflict in dates to a misunderstanding by the reporter, who obviously wrote his article before the Chicago contest.

7. Morse contest: 1936 Candler montage; *Boston Traveler*, February 17 1929. This may in fact have occurred after the New York contest; the *Chicago Evening American* of August 2 1922, referring to earlier events, mentions McElroy's 56.5 words per minute New York record, and that he "also has made a maximum reception of 70 words a minute in the American Morse (Phillips) code." It is likely that McElroy later confused the events, as he did the speeds.

8. Smyth win: *Radio World*, November 25 1922, p. 23. Call 2CKB: Prior to 1929, international prefixes weren't assigned. For international contacts during and after the transatlantic tests of 1923 when transcontinental amateur contacts became common, informal "international intermediates" were used to indicate one's country (e.g., U.S. stations used "u," Canada "c"). *QST*, August 1928, p. 35. *QST*, January 1929, p. 7. *200 Meters & Down* by Clinton B. DeSoto (ARRL, 1936) p. 85.

9. Shute quote: E.R. Shute to McElroy, September 17 1954.

10. Letter from Carlton: 1936 Candler montage.

11. Associated Press: J. Somma, AP, to author, May 4 1992. W.M. Powers to McElroy, April 14 1963.

12. AMRAD trans-Atlantic test: Unidentified clipping, November 29 1923. Alan Douglas. Undated radio map (1920's).

13. 1006 Broadway: *Boston Telegram*, December 28 1923. Margaret McElroy. Nutting's Lake: Margaret McElroy. Margaret Frances Coleman, daughter of John J. Coleman and Anna (Annie) Peecha, was born in Boston on April 15 1904, ref Mass. Department of Public Health, Division of Vital Records.

14. Birth date of John C. McElroy: John C. McElroy. Mass. Department of Public Health, Division of Vital Records.

15. Association with Walter Candler: Ted's brother Howard once told Bob McGraw, W2LYH, that Ted never used the Candler system, but agreed to the ads in return for Candler recommending Mac Keys; McGraw to author, September 14 1993. However, Ted's association with Candler began before he started making Mac Keys (1934); see Candler's ad in *Railroad Telegrapher* magazine (Order of Railroad Telegraphers), September 1927, p. 197.

16. Past several years; Chemical Toilet: Boston *Traveler*, February 17 1929; the article says "six" years. McElroy's boss at the Traveler was Ralph K. "RKS" Smith, ref McElroy to John J. Lavin, MTC, April 5 1963. The Associated Press says McElroy resigned from AP on February 27 1926, ref J. Somma, AP, to author, May 4 1992.

17. Everdean Street et cetera: *Boston Traveler*, July 27 1933. Margaret McElroy, John C. McElroy, August 6 1992. Dorchester, in the southern part of Boston, was annexed to the capital of Massachusetts after the Civil War and became one of several "neighborhoods" that make up much of Boston.

Chapter 3:

1. World's Fair, ref "Antiques Across America", *Country Living* magazine, October 1991 p. 20.

2. "dropped in at the Western Union", travel to Chicago, Western Union sponsorship: Unmarked clipping, July 27 1933. *Boston Traveler*, July 27 1933. *Boston Globe*, July 27 1933. *Syracuse Herald*, July 30 1933.

3. The contests: "World-Wide ARRL Convention", *QST* August 1933 p. 70; "World's Fair Amateur Radio Convention", *QST* October 1933 p. 23; Coggeshall. Judge F. H. Schnell was the ARRL Traffic Manager in 1922 (*QST* November 1991 p. 90) and was mentioned approvingly (when he was "Lieut. Schnell") in a Karas ad in 1926 (*QST* April 1926 p. 65). Chaplin's nails: Don DeNeuf, President of Press Wireless, to George Ward, related in Ward to author, September 21 1993. George Hossfield: Coggeshall to William G. Pierpont, February 8 1988. "don't feel good": Coggeshall to Joel P. Kleinman, WA1ZUY, ARRL, May 19 1977. Note on allowed errors: In McElroy *QST* Nov 1935, his reference to "the [Chicago] rules which allowed 5% errors" was incorrect. QRS means "slow down."

4. "wild acclaim": Coggeshall. One wonders if Coggeshall wasn't overstating the case. Years later, he demonstrated his lack of respect for McElroy and wasn't reticent about disparaging him, ref Pierpont to author, September 4 1991.

5. Question of Chaplin's winning speed: ARRL Code Speed Contest Official Rules (as used in 1933). John McElroy is certain that the telegram "from the Board of Commissioners" said McElroy had won. But who was the "Board of Commissioners"?—it was an ARRL-sponsored contest. And why would Borsody, and not Ted McElroy, have the telegram? Unfortunately, the telegram is not available for inspection. "World's Fastest": also see base casting, 1934 Mac-Key. Chaplin set record: *QST*, October 1933, p. 23. Also Coggeshall, who states that the contest "established a new high for speed." The ARRL has never indicated that those statements which it published crediting Chaplin with a record are not correct, nor did it respond to my request for information on this question.

6. "There was one tournament": McElroy *QST* Nov 35.

7. "I flopped on oranges and lemons": Part II.

8. "At that time I'd had no practice": McElroy *QST* Nov 1935.

9. "In the early tournaments": *Boston Post*, March 12 1944.

10. "Nowadays, he never trains": Nagler. Note again the reference to the one-tenth point loss.

11. "Acting upon the advice": *Boston Traveler*, February 14 1944.

12. "showed signs of over-training" and following quote: Coggeshall to Pierpont, February 8 1988.

13. "There was no question": McElroy *QST* Nov 35.

14. Tangora record: Guiness Book of World Records.

15. RCAC Exhibit, Borsody quotes: Borsody to Bill Eitel, undated (received by Eitel April 1975). Borsody to Bill Eitel, January 17 1975; this letter states that the speed was 79 words per minute, but it was in fact certified on McElroy's copy as 76 words per minute. Unless McKessy had made punching typos that Borsody accounted for, the first page of McElroy's copy shows four errors.

16. went out and got drunk: In note to Borsody dated September 14 1935 (the "Radiogram," see Chapter 4) he asks, "remember when we got drunk...in Chicago at the Fair?" Actually, this could have occurred before the test; if so, might it have affected the outcome?

17. Steinbeck quote: *Travels with Charley* (The Viking Press, 1962).

18. Vibroplex-sponsored contest: Walter Stiles, February 7 1991

19. "Larry": Letter to the author, June 18 1991, name withheld by request.

20. Kennebunkport hamfest: Told to the author at Deerfield, NH, on October 5 1991 by a VE3 who was there (and whose name and call I failed to record—sorry, OM).

21. Unable to pay the rent: John C. McElroy. McElroy's first *QST* ad (December 1934) also indicates the new address. Second floor apartment: John C. McElroy.

22. "Kata Kana": John C. McElroy. See Chart of Codes. It is properly called Japanese Morse, since "Katakana" (one word) refers to the simplified Japanese ideographic script; see *QST*, September 1942, for an article on the code. During WWII, McElroy would translate the code for the U.S. Navy.

23. Typing demonstrations: McElroy to John C. McElroy, December 14 1953.

24. Started making telegraph keys: In a 1960 memo to Fred Kurtz, Sylvania, March 18 1960, McElroy recalled that his "first notion [for a product] was a low priced audio oscillator" inspired by National's, followed by a hand key, bug, and tape transmitter. But according to his advertising, McElroy's product sequence was: bug (*QST* December 1934), transmitter (Mac Auto; *QST* December 1935), oscillator (*QST* February 1936), hand key (*QST* July 1937). However, a close reading of the ads indicate that the early ones for the Mac Auto were premature announcements; it did not actually appear until 1936, after the oscillator, and even the one shown in the 1937 *Handbook* may be a prototype. "imitation Vibroplex": Memo to Fred Kurtz, Sylvania, March 18 1960. For information on Vibroplex keys, see the *Vibroplex Collector's Guide* by the author (Artifax Books, 1990) and *The Vibroplex Co. Inc.* by Holly (The Vibroplex Co. Inc., 1990). The early Vibroplex bugs used a separately pinned dash lever, giving it perhaps the same effect as McElroy's independently suspended dash lever. The Radio Shack offered the Mac Key in *QST* starting in the same December issue. "I did everything myself": McElroy to John C. McElroy, December 14 1953. The "sun room" was probably the living room on the sunny beach side of the apartment.

25. Sam Curtis School: McElroy to Roberts, Lowell Institution for Savings, June 8 1960.

26. National oscillator: announced in *QST*, February 1934, p. 82, and *Radio News*, October 1934, p. 204.

Chapter 4

1. Second annual hamfest: *Boston Transcript*, January 29 1935. *Boston Herald*, February 3 1935. *Boston Sunday Globe*, February 3 1935. Unidentified clippings, February 1 and 2 1935.

2. Cape Cod demonstration: "Official Statement," March 11 1935. *Radio News*, July 1935, p. 49.

3. Tape center holes and Wheatstone timing: See Appendix F. A word of 21 tape center holes was an unusually short standard even for 1935. Under today's "PARIS" standard (25 tape center holes, or 50 baud), McElroy's Cape speed would have been 65 words per minute; see Appendix G.

4. Mac-Key details and references are contained in Chapter 11.

5. Mac-Auto: *QST*, December 1935. McElroy to Gaston Technical Institute, November 26 1954. Memo to Fred Kurtz, Sylvania, March 18 1960.

6. 1935 Brockton Fair: Official Souvenir Program. Unidentified clipping, September 14 1935. The Program called for the contest to begin at 2:30 P.M. "The first I knew": McElroy *QST* Nov 35. Services of Albert Tangora: Veteran Wireless Operators Association, 1942 Yearbook. "[T]he tape that you sent": McElroy to Borsody, September 4 1935. Amateur contests: The awards were actually presented by McElroy at a later meeting of the South Shore Amateur Radio Club. Bob Ruplenas, W1DDO, August 5 1993. Cootie key is an early term (originally a trade name, I have heard) for a sideswiper—or, as the J.H. Bunnell Co. called theirs, a "double-speed key."

7. Brockton, McElroy's version: McElroy *QST* Nov 35. The program indicates that Kolster was, in fact, a judge. Apparently Newcomb Thompson, also listed in the program as a judge, didn't appear. Jack Donnelly represented Mackay Radio, New York.

8. Rumored that McElroy had lost: Charles Nevel, W3KSQ, was told by a spectator who attended a contest ("I believe it was at Brockton, Mass.," Nevel said) that Ted had lost. "Anyway, at this point Macs XYL [wife] got into the act and was crying the blues that it would be bad publicity for McElroy's business should it be known that he had lost a previously won award. So the winner being a good sport said, to hell with it lets have a beer, and conceded to Mac." Nevel to author, December 7 1992. This story clearly refers to the 1935 Brockton Fair contest. I believe Nevel's informant did not understand the situation that arose, nor its resolution. For one thing, Chaplin,

not McElroy, was the champion at the time of the test, so McElroy could not have "lost a previously won award." For another, it is doubtful that Joe Chaplin, who "didn't even answer" McElroy's letter, was such a good sport as to simply hand over the championship. Finally, Chaplin could not give the win to McElroy for the simple reason that Chaplin didn't win; and if McElroy had been the loser, why did the judges offer *Chaplin* the chance to try again? As Nevel said in reference to other stories about McElroy, "beware of these legends."

9. Toye "had been working on Chaplin": Veteran Wireless Operators Association, 1942 Yearbook. Toye died January 30 1942.

10. Donnelly to McElroy, April 1 1963,

11. ARRL account: *QST* October 1935, p. 34. The article refers to Chaplin's 1933 win as having set a record of 57.3 words per minute, but see Chapter 3.

12. Local newspaper story: Unidentified clipping, September 14 1935.

13. McElroy's expressions of appreciation include: A "Radiogram" to Borsody, dated September 14 1935, which was on a 1933 Chicago World's Fair RCA Radiogram form. It concludes with a PS: "Also remember when we got drunk in Boston and in Chicago at the fair?" A telegram to Borsody sent from Dorchester, Mass., to Borsody in Brooklyn, N.Y., via Postal Telegraph at 6:25 P.M. on September 15. A mention of Brosody's transmitter in McElroy *QST* Nov 35 in which he says that Borsody "calls his machine the 'Crude'", but Borsody claimed that it was actually McElroy who referred to Borsody's keyer as the "Borsody CROOD", ref Borsody to Bill Eitel, January 17 1975. A telegram to The Hallicrafters shown in *QST* December 1935 p 4 (although there is a Rochester, Mass., the city of origin on the telegram probably should be "Dorchester"). Credit to Royal: McElroy *QST* Nov 35.

14. Presentation of Brockton trophy, and McElroy quote: *Boston Globe* October 22 1935.

Chapter 5

1. Opened 1936 with an ad: *QST* January 1936, p. 74. From my limited study of serial numbers (Appendix E), I suspect McElroy was exaggerating the number of keys he sold.

2. Walter Vetromile, then living in Somerville, advertised "Bugs—$6, postage paid" in a Ham-Ad, *QST* March 1937, p. 123. No, he didn't say they were Mac Keys, and his price was substantially less than McElroy's $7.95. If they were Mac Keys (as I have assumed), perhaps Ted gave him a good discount. Or perhaps they were new old stock, since in May of 1937 McElroy announced the new 1938 model.

3. Teaching: McElroy ad, *QST* February 1936. Candler ads, *QST* March, April, June 1936. Unidentified clipping dated November 22 1935.

4. Navy keys: *Boston Traveler*, January 13 1936. 1937 *Handbook*, p. 470. A year earlier: *Boston Traveler*, December 18 1834, page 2. The military nomenclature for the key finally produced by McElroy for the Navy was CMK-26009. A Navy radioman is shown using McElroy's Navy key in a news photo in the May 5 1936 *Boston Globe*. J.H. Bunnell Co. also made a speed key for the Navy, probably obtaining its contract about the same time.

5. Mac Cord: McElroy Flyer, March 14 1936.

6. "Mac Oscillator": Ad, *QST* February 1936.

7. Mac Auto: *Handbook*, 1937. McElroy to Gaston Technical Institute, November 26 1954.

8. Mac Marine: McElroy flyer, September 1 1936.

9. Hamfests: *Portland Evening Express*, April 6 1936. *Syracuse Herald*, March 17 1935. *Boston Globe*, 1935 (undated clipping). Unidentified clipping, possibly April 1935. McElroy booth, Boston Hamfest: program, April 18 1936.

10. W1JYN: John C. McElroy. *Radio Amateur's Callbook*, Fall (September) 1936. McElroy wrote two memos in 1963 stating that he bought the Loomis book in 1915 and "got my license in 1920 on it", undoubtedly referring to his commercial license. But since the first edition of *Radio Theory and Operating* (Loomis Publishing Co.) appeared in July 1925, he more likely studied it, as I say, for his amateur license. I have found no documentary evidence that McElroy ever got on the air as an amateur. The article "25 Years of Code" by James W. Harrison, W4FSE (*Radio News*, November 1939, reprinted in a Candler montage) has McElroy's call incorrectly as W1JYM. S.S. Pierce Scotch: McElroy to Robert Abbott, March 13 1951; Abbott to McElroy, August 28 1951; John Cannava, September 10 1993. Gin and Moxie: John Cannava, September 10 1993.

11. Reg Adams: Hazel (Mrs. H. Reg) Adams. Colin Waters, G3TSS, to author, June 22 1992, July 17 1992,

et al. Closest friend: McElroy to Adams, February 19 1958. Webb's: *The T. & R. Bulletin*, August 1937, pp. 90, 91. The "1938 Mac Key" appeared in the spring of 1937.

12. McElroy moved: *QST* August 1937, p. 95. A 1937 Boston business directory lists the business as a manufactory of telegraph apparatus. Contini first employee: "E" Award program; Helen (Mrs. John) Contini.

13. Don Hawley: Hawley to author, September 14 1991. The key McElroy gave to Hawley, a 1936A model Mac Key with serial number 7028 on an aluminum plate, is in the author's collection courtesy of Don Hawley, W4ZU. "new 1938" model: See *QST*, May 1937, p. 117.

14. Trade-in: Russ Loud, April 15 1993. The Mac Key is now in the Bill Legge (NT1R) collection.

15. World of Tomorrow: The 1931 date in the *Traveler* article is obviously not correct. In addition to the three articles mentioned, there are others in the *Evening American* (November 2), *Traveler* (November 17), *Boston Globe* (November 17) and two unidentified clippings (November 5 and 17).

16. "Association of Wireless Operators": The *Globe* report may be correct, or it may mean the American Radio Telegraphists Association, of which McElroy was a member. Ref Part III.

17. Burgess: Telephone interview, November 7 1991. The Mac-Key was a 1939 Deluxe model, serial number 3487. The Streamkey was a 1938 (i.e. first) Deluxe model with a silver (rather than black) background nameplate. They are in the author's collection courtesy of Bill Burgess, W1BDS. For information on Burgess' efforts during the hurricane and his receipt of the Paley award, see the Desoto article and *QST*, July 1939, p. 23.

18. Asheville meet, in general: *Asheville Times*, July 3 1939. W.J. "Buck" Wortman, W4CYB, to author, October 26 1992, including notes compiled by Wortman in 1985. "Are You a Good 'CW' Operator," Wortman, *The Repeater Journal* of the Southeastern Repeater Association, Inc., February 1989, p. 11. *QST*, July 1939, p. 64.

19. McDonald 1937 win: Kenneth Stecker, W8SS, Chairman, Contest Committee, to McDonald, September 18 1937. The contest was held on the 16th. This letter is reproduced in Candler's *Book of Facts* published in the 1940's. Amateur title: *Asheville Times*, July 3 1939.

20. Wortman appointed judge: Wortman to author, December 19 1992.

21. The contest itself: Harrison's quotes are from his article, "25 Years of Code" which appeared in *Radio News*, November 1939, as reprinted and distributed by Candler, except that I took the last two paragraphs ("W4HX stops the machine") from the *Smoke Test* (newsletter of the WCARS, Asheville NC), December 1985, which reprinted Harrison's club newsletter article appearing in *THE SPARK GAP* (newsletter of the Asheville, NC, chapter #145 of the QCWA), April 18 1983, which itself was a reprint of the "true story" in *THE ARC* (official publication of the Asheville Amateur Radio Club), August 2 1939. The *Radio News* article has McElroy as W1JYM, an error. The two articles are very similar in content and language, but the *Smoke Test* article has McDonald dropping out at 70 wpm; since it seems certain that he reached 75 wpm (see Candler ad, *QST*, March 1940, and McDonald's letter, note 23 below), I have used the *Radio News* version. My identification and descriptions of the judges are from a 1939 *Radio Amateur Callbook* (information courtesy of Bob Arrowsmith, W4JNN) and from W.J. "Buck" Wortman, W4CYB (letter to author, October 26 1992). The guardians of the tapes were W4TW (ref *Smoke Test*) and Buck Joyner, W4TO (ref Buck Wortman). Concerning the meaning of "the 24 Dot Word reception," see Appendix F for a discussion of Wheatstone tape word lengths. Concerning the effect thereof, see appendix G.

22. Walter Candler, whose "students" performed so well at Asheville, died on April 23 1940, ref notice included with *Book of Facts* mailed June 4 1940. Not long after Walter's death his wife, Madge, moved the company from Asheville to Denver and carried on the mail order business for many more years.

23. "We both copied solid": McDonald to William G. Pierpont, August 29 1940. Carron's *Morse Code, the Essential Language* (ARRL, 1991, second ed.), quotes this letter but incorrectly places a period between "75.2" and "I guess it was."

24. Held speed in contempt: See Chapter 2.

25. Unbeaten record: *Guiness Book of World Records*, any edition. Recognition is for "the highest recorded speed at which anyone has received Morse code", to which should be added the qualifier, "in official competition." Why the qualification? To become a member of Bill Eitel's (WA7LRU/W6UF/W6AY) 5-Star Club one was required to demonstrate "head copy" of 80 words per minute. This club was formed no later than 1975. A few of its members could understand 100 words per minute. Eitel died February 26 1989. Refs *The Worldradio News*, April 1976. Eitel to Borsody, May 1 1975. For examples with "hard copy" see the unofficial records set by James Ralph Graham (79.4 words per minute) and McElroy (83 words per minute) discussed in Chapter 7. McElroy would later

say that his Asheville record was 77 words per minute, confusing it with his Cape Cod run (see, for example, his Chart of Codes). Lee Aurick (W1SE), in his article "You *can* copy 30 Words per Minute!" (*QST*, September 1993), states that McElroy "claimed the world's record of 78.5 words per minute"; if McElroy ever made such a claim, he was mistaken as to the speed.

Chapter 6:

1. 100 Brookline Ave.: August 1939 McElroy flyer. Spring-Summer 1941 McElroy catalog.
2. Move to Milton: McElroy to Harvard College, February 18 1954.
3. New telegraph keys and equipment: *Handbook*, 1941. The Super Stream-speed was the S-600. The amateur model was the A-400; the quote is from a McElroy ad, date and source unknown, similar to that in the 1941 Handbook but which includes the A-400. Chrome base: Quote from March 1938 flyer. June 1838 flyer. 1941 *Handbook*. Bob McGraw, W2LYH, to author, July 15 1991; McGraw attributed the "faulty chrome" story to Howard McElroy (Ted's brother).
4. Loan from Radio Shack: John C. McElroy. A similar story was told by Ted's brother Howard to Bob McGraw, W2LYH (McGraw to author, July 15 1991).
5. Brookline Avenue is on the right of the "Richardson Building" (c. 1920) in the photo on page 54. Jersey Street, now Yawkey Way, angles off of it to the left. And on the other side of Yawkey Way is Fenway Park.
6. New hire: John Cannava, September 10 1993.
7. Incorporation: Articles of Organization on file with the Department of Corporations and Taxation, Office of the Secretary of the Commonwealth, Boston, Mass.
8. "this'll all be yours": John C. McElroy.
9. "another good war": Part I.
10. Inventor of phototube keyer: Memo to Saratoga, April 11 1963.
11. Brothers: Jack, ref Newspaper clipping (source unknown), December 7 1968; biographical brochure, June 21 1961. Jack died on December 8 1983, ref *Boston Globe*, December 10 1983. Howard, ref Arthur Bradford, W1EQK, to author, June 16 1992; *QST* July 1992, p. 36; Jack Lally, W1HDC; *Boston Sunday Globe*, May 30 1993, p. 35. The Maritime Service spelled the island's name "Gallups." Howard's sine at WSL was "HM"; he would return to WSL after the war. Later he would hold amateur call KA2EHP. Paul, ref Jack Lally, W1HDC; John C. McElroy; Thomas D. McElroy, May 24 1993.
12. Reg Adams: Hazel (Mrs. Reg) Adams; Colin Waters, G3TSS, to author, June 22 1992. McElroy political brochure. Pat Hawker, G3VA, has found problems with MacDonald's account. Adams is mentioned in various other books, including *Secret War* by Nigel West (pub. unknown) in which he is listed as H.R. Adams (his full name was Horace Reginald Adams). Adams died in 1983.
13. Littleton property: McElroy to the file, March 14 1945. Deeds recorded with Middlesex County South District Registry of Deeds (Cambridge, Mass.) at Book 6645 Pages 271 (Abbott), 273 (MacDougall), 273 (Wood et al.). Plan 401 of 1952 recorded with Deed at Book 7882 Page 186. Nagler calls it "McElroy Lake" and incorrectly describes the premises.
14. Jukeboxes: Nagler. *New York Herald Tribune*, November 14 1963. Stan Sherman, ex-W1PYQ, to author, February 14 1993.
15. Nicknames: Ted DeBruyn, April 29 1993. Irene (Kaszuba) Rhilinger, August 11 1993. Memo, January 28 1952.
16. Crosley accident: Ted DeBruyn, April 29 1993. Use of Crosleys in building: John C. McElroy.
17. 1942 VWOA Dinner-Cruise and Marconi Award: VWOA Yearbook, 1942, 1943. *QST* magazine, April 1942, p. 27. According to VWOA Secretary Edward Pleuler Jr., the early members were or had been seagoing radio operators; the term "Annual Cruise" was coined by 1926 President James Maher to describe the banquet and entertainment which was likened to that of an evening dinner affair aboard a passenger ship.
18. Chart of Codes: VWOA Yearbook, 1943. Official banquet photo. Memo to Saratoga, July 18 1962. The version that hung behind the head table at the VWOA meet as well as the slightly different version reproduced in the 1943 VWOA Yearbook both have McElroy's products above the keyboard. The actual mass-produced version (as well as that shown in McElroy's ad on the back cover of the 1943 VWOA Yearbook Supplement) has the products below the keyboard as shown in the reproduction herein which is from McElroy's 1943 catalog #643. The

version with the "E" flag shown in Ingram's *Keys, Keys, Keys* (CQ Communications Inc., 1991), p. 24, is an advertising montage, like that in the 1945 *Handbook* and the color ad in the February 1944 *Radio News*, p. 186.

19. "E" award: Patterson to the employees, October 16 1943; McElroy to Patterson, October 20 1943; official invitation; official program; recording of radio program (Mutual Broadcasting System #4-9495). Photographs of the ceremony and the party afterward. Larry Rossiter, VE7QF, to author, August 1 1991 (identified secretary). Father's death: From information compiled by George H. McElroy (Ted's second cousin) and John W. McElroy (Ted's brother), 1978. The portion of Colonel Lawton's speech related in *Telegraph and Telephone Age*, date unknown (about December 1943), p. 18, is substantially correct, but the photo caption misidentifies Sgt. Edwin M. Armstrong as "Edward." Frank Jason (Boston *Post*, March 12 1944) wrote that after he was given the speech, McElroy simply "crumpled it up in his fist and dropped it unnoticed on the floor." The alleged McElroy quote in the January 1944 *QST* (page 54), referring to "the radio amateurs bonded together in the American Radio Relay League," is spurious; no one referred to amateurs or the League during the ceremony. The *QST* article also misidentifies Sgt. Armstrong in a photo caption on the same page as "Robert."

20. Company gross ($4,000,000 in 1942): Nagler.

21. The fire, farmhouse, company gross: *Radio and Television Weekly*, December 29 1943. Nagler. 1953 catalog (mobile equipment, p. 17). McElroy to file, March 14 1945. *Boston Herald*, November 13 1963.

Chapter 7:

1. VWOA: Banquets and Marconi award: VWOA Yearbooks, 1944, 1945. Official banquet photos, 1942, 1943, 1944 (Drucker-Hilbert Co., NY). McElroy life member: 1943 Yearbook Supplement (proof copy) photo caption. 1945 Yearbook, p. 9. Halligan life member: 1944 Yearbook, p. 52 photo caption. 1945 Yearbook, p. 9. Halligan chapter president: 1942 Yearbook photo caption.

2. Company band at VWOA meet: Official photo. Unidentified (New York) clipping. Getting there: Thomas D. McElroy, May 24 1993. Tom was told the story by a source since deceased; the other references appear to connect the trip to the 1944 meet.

3. Dodgers: *Boston Globe*, March 1 1944, evening edition. Boston *Post*, March 12 1944. Unidentified clipping, Burt Whitman byline. Unidentified clipping, New York, March 2 dateline. Unidentified clipping, Harold Kaese byline. Unidentified clipping, Jerry Nason byline. The long quote is from the *Globe*.

4. Rossiter: Rossiter, VE7QF, to John Elwood WW7P, July 1 1991. Rossiter to author, August 1 1991. The key he bought from McElroy was an Original model Vibroplex, Standard version, serial number 132825. Although McElroy no longer made keys nor had any in stock, they would continue to be available from his retailers even after the war (new old stock), according to reports from those who bought them at that time.

5. "did a bit of smuggling": Memo to Mahoney, July 23 1963.

6. Description of McElroy: Boston *Post*, March 12 1944. *Boston Globe*, March 1 1944, evening edition. Nagler.

7. Telegraph Apparatus Co.: John C. McElroy. *Handbook*, 1945, 1946. *QST*, 1944-1946. Newark ad: See, for example, *QST*, April 1946 p. 105.

8. Radio Surplus Corp. was located at 4237 South Indiana Avenue in Chicago. McElroy to Radio Craftsman Company, January 31 1947.

9. Reg Adams: Hazel Adams. Colin Waters, G3TSS, to author, June 22 1992 (with information from Pat Hawker G3VA). McElroy to Adams, February 19 1958.

10. Graham challenge: *Boston Traveler*, March 23 1945, p. 31. *QST*, June 1945, p. 50. Graham copied on a standard typewriter; the speed standard is unknown. McElroy 83 words per minute: *Providence Journal*, May 22 1937 (83 words per minute). *QST*, August 1937, p. 90 (82 words per minute).

11. McElroy joined Merchant Marine: Service documents. *Boston Traveler*, March 23 1945, p. 31. *QST*, June 1945, p. 39. *QST*, October 1945. *Radio News*, December 1945. *The Long Haul* by Robert Carse (W.W. Norton, 1965). "Chicken Sheet," Nov. 25 1945 (SS Benjamin Huntington, 1945). Hazel Adams.

12. The Lend-Lease program was terminated on August 21 1945.

13. Hallicrafters: *QST* October 1945, *Handbook* 1946.

14. Change of offices: Department of Corporations and Taxation, Office of the Secretary of the Commonwealth, Boston, Mass. The information appears as a notation on the corporation's file card, since Articles

of Amendment themselves are frequently purged from the files after some time.

15. The gang with Ted in photo: Identification courtesy of Irene (Kaszuba) Rhilinger and John Cannava.

16. Correspondence with prospective student: T.P. to McElroy, August 4 1947. McElroy to T.P., August 5 1947. Name withheld by author.

17. The Ronne Antarctic Research Expedition was a voluntary, unpaid, 23-member (including two women), government-aided, privately funded scientific expedition. "As we flew on": Finn Ronne. *Antarctica, My Destiny* (Hastings House, 1979), p. 170. "Ted's reply...", other Kelsey quotes, and equipment details: Lawrence D. Kelsey to author, February 28 and March 26 1992. Kelsey was then W3LYK, and is now NP4RH. In McElroy's 1949 *Handbook* ad, he praises Kelsey's communications report on the expedition. "supervise installation": The *Sunday Enterprise* (Beaumont, Texas), January 12 1947. "In flying over": Ronne, *Antarctic Conquest* (G.P. Putnam's Sons, 1949), p. 198. Ronne plotted his flights: *Antarctic Conquest*, p. 271. The map showing "Mt. McElroy" is from page 249 of *Antarctic Conquest*; on page 289 Ronne says it is named after "M.C. McElroy"—a mistake, or could it refer to Mrs. (Margaret Coleman) McElroy? Names of wives and family were given to other landmarks. *Geographic Names of the Antarctic* (U.S. Board on Geographical Names, 1980) says it is named after "T.P. McElroy"—an error, but clearly meaning T.R. McElroy. Dispatch: Sent by Kelsey under call KICJ via Overseas-Foreign Aeronautical Comm. Sta., New Orleans (WEK). The original coordinates given in Ronne's dispatch have since been corrected. The location of Mt. McElroy is at latitude 74°09" South, longitude 63°12" West, according to Eve Edwards, Geographer, U.S. Geological Survey, March 22 1992. *Boston Globe*, January 18 1948. The article is dated January 13.

Chapter 8

1. Jackie graduated: Academy degree; John C. McElroy.

2. Theda McGrath, May 5 1991. This interview is a reference for other incidents in this chapter, including: Chou incident, new building, children's hour.

3. "In the past thirty years": Letter to "Ed", December 12 1950. Letter to "Val", November 29 1950.

4. "I met him once": Clyde Robinson, June 4 1992.

5. Chou skiing accident: Notices to employees, March 26 and April 2 1951.

6. "Someday this company": John C. McElroy.

7. Test set contract: Memo to all employees, January 28 1952.

8. Code practice systems: See Department of the Army technical manual TM11-2093 (Washington: U.S. Government Printing Office, 1950).

9. Intercom calling system: Undated memo (probably April 1952). Memo to All Concerned, April 30 1952. Memo to All Concerned, May 2 1952. Memo, February 3 1953. Memo to Everyone, October 6 1953. Stan Sherman, ex-W1PYQ, to author, February 14 1993.

10. "Big companies have": Memo to all employees, January 28 1952.

11. "It was my fault": Memo to all employees, January 28 1952.

12. Christmas party: Memo to employees, December 23 1952.

13. Layoff with pay: Memo to Jack McElroy and Joe Cullen, August 24 1953. Memo to employees, August 26 1953. Layoffs: Memos to employees, various, January 26 1951 through June 5 1953. "So this gives all of you": Memo to each layed-off employee, June 10 1952.

14. Jack was vice president: Bob Sale to Ralph Caryl, May 10 1989. "One of these days I will be gone" and following quote: McElroy to John C. McElroy, undated (about December 25 1953). "for the time when" and re Mass. Radio School: McElroy to John C. McElroy, December 23 1953.

15. Vehicles: Note for Santos [Cannava], August 15 1952. Lincolns: John C. McElroy. Cadillac: C.E. McGinnis, Cadillac Motor Car Division, to McElroy, February 11 1952.

16. Rolls Royce: There was no Rolls labelled the "Phantom I"; when the "Phantom II" was introduced in 1929, the earlier "New Phantom" was thereafter popularly called (even by Inskip) the Phantom I. The Phantom I was the second (and last) series of cars manufactured in Springfield, Mass. Springfield produced 340 chassis in 1927. The serial number of McElroy's Rolls was S 168 PM; when originally sold in September 1927, it had a "St. Martin" Town Cabriolet body. Marilyn Miller (1898 - 1936) was a Broadway musical star of the twenties; she appeared in a few movies in the early thirties, including *Sally*, a New York *Times* "10 Best" film of 1930. *Old*

Cars News, July 9 1992. J.S. Inskip, President, J.S. Inskip, Inc. to McElroy, February 19 1954. McElroy to J.S. Inskip, Inc., February 15, February 24, June 9, July 1, July 2, September 13 1954. McElroy to Autobooks, January 11, August 30 1954. McElroy to Shawsheen Motor Mart, July 9 1954. McElroy to H.J. Mulliner and Co. Ltd., September 1 1954. McElroy to Robert James Company, October 14 1954.

17. "We have never made": McElroy to Harvard College, February 18 1954.

18. Telephone carrier: Memo for all concerned, July 28 1953. Form letter, March 1 1954. Memo "To All Those Who Would Normally Read the Mailboard Regarding the Telephone," June 18 1954. Memo to all concerned, September 2 1954. McElroy's only ARRL ad for the carrier system units appeared in the 1954 ARRL *Handbook*, p. 72.

19. 1954 *QST* ads: November 1954 p. 128; December 1954 p. 102.

20. Company debt, etc.: Agreement between McElroy Manufacturing Corporation and T.R. McElroy dated February 10 1955. It couldn't survive: Theda McGrath believes that McElroy "never would have sold his business if it had been on solid ground." "tough times", "running the company": John C. McElroy.

Chapter 9:

1. Sale of company: John C. McElroy. Agreement dated February 10 1955. Articles of Amendment dated March 3 1955, filed with Secretary of State March 14 1955. Theda McGrath, May 5 1991. Middlesex County South District Deeds, book 8424 page 230, book 8950 page 243, et al.

2. Telecommunications Corporation: John C. McElroy. 1955 ARRL *Handbook*, pgs. 43-48. Unidentified clipping, "Littleton Firm Under New Management." Mimeographed form letter dated January 1956. Mimeographed form letter, undated, titled "MC-650 International Morse Code Practice Tape."

3. Changes of names: Dielectric, Ironrite, General Controls and Ascom-Warren inhabited the building over the years. Joe Goode: McElroy form letter, 7 April 1955.

4. Trip to England: Memos dated October 29 through November 17 1955.

5. Purchase of depot: McElroy to John Carr, Sr., June 30 1954. Middlesex County South District Deeds, book 8731 pages 241, 246, book 9043 pages 402, 405, book 11707 page 288. Russell Lawrence: Memo dated October 30 1955. Memo to Saratoga, undated (received February 7 1958). Articles of Organization, dated April 27 1957. John C. McElroy.

6. From leaving Warren, to getting settled with Saratoga: McElroy to the *New Englander*, December 28 1957. Sy Saslow, WB2MEW, to author, June 26 1992. Memo to Frank Jarvis, Sylvania, February 18 1958. Norwood Technical College to McElroy, January 27 1958. (McElroy had written to the college in November of 1957.) The Republic of Liberia, Bureau of Maritime Affairs to McElroy, December 27 1957. McElroy to Reg Adams, December 27 1957. Memo to Saratoga, February 18 1958. Sy Saslow, May 19 1992. Dave Levine, KC2E, December 14 1992. Ted Williams did not respond to inquiries concerning an involvement with McElroy.

7. "dreaming dreams" at the depot: Memo to Eugene Watt, Raytheon, February 26 1958. Memo to Saratoga, April 18 1958. Memo to Saratoga, November 30 1958.

8. Late April travels: Memo to Saratoga, May 1 1958. Samuel F.B. Morse was born on April 24 1791, in Charlestown, Mass.

9. Family matters: McElroy to Reg Adams, February 19 1958. Memo to Saratoga, undated (stamped as received June 9 1958). Unidentified clipping, December 7 1968. Ted's grandson John C. McElroy, Jr, was born on September 10 1950. John W. McElroy was the son of Ted's brother Charles; John entered the Navy in 1961, and in 1968 Chaplain (LCDR) John W. McElroy was awarded the Bronze Star for service in South Vietnam.

10. Politics: *Lowell Sun*, October 27 1952 (as reprinted in the *Valley News*, October 30 1952), December 15 1959, March 19 1963. *Budget-Wise* (Littleton), May 22 1958. Memo to Alvin Weinreber, Sylvania, November 12 1958. *Public Spirit* (Ayer), June 9 1960. Littleton Democratic Town Committee broadside, November 1960. McElroy political brochure, November 1960. Memo to Eugene Watt, Raytheon, July 18 1962. *The Littleton independent*, November 13 1963. Political favors: Memos to Saratoga, July 23 1963, August 12 1963.

11. Brazil contest fiasco: The initial (undated) letter from Orlando Nobrega indicates that the *Departamento dos Correios e Telegrafos* is within the *Ministerio da Viacao e Obras Publicas*. The *Public Spirit* story, based on information from McElroy, contains several minor inaccuracies, including the statement that his Asheville record was 77 words per minute. *Brasil* is the native (Portuguese) spelling. References: Memos to Saratoga, November

27 1961, December 11 1961, April 29 1962. Telegram, Nobrega to McElroy, December 2 1961. Nobrega to McElroy, December 5 1961. Telegram, Nobrega to McElroy, December 7 1961. Telegram, Nobrega to McElroy, December 13 1961. "Calling on the Neighbors," Ted Ashby, *Boston Globe*, April 1 1963. Sy Saslow, December 7 1990. Telegram, McElroy to Nobrega, undated draft. Receipt, Shannon Shamrock Inn, December 19 1961 (with handwritten note on reverse). Irish Black Thorn stick: Memo to Saratoga, April 29 1962.

12. Telegraph practice sets: Memos to Saratoga: January 1, 4, undated (received 9th), 19, May 21, 23, 1962. John C. McElroy. Sy Saslow, May 19, 1992. Quotations re Morse: Memo to Joe Mangan, February 19 1958.

13. "the millions of dollars": Memo to Thomas Breen, Milo Electronics, June 23 1962.

14. Chart of Codes debacle: Robert F. Sale to Ralph Caryl, W8LHG, May 10 1989. Memos to Saratoga, July 16 (2), 18, 19, 1962. Memo to Eugene Watt, Raytheon, July 18 1962. Saratoga to McElroy, July 17 1962. As noted in Chapter 6, the original chart measured 38" by 25".

15. *Life* non-article: Ref the photographs, which were taken on July 30 1962. John C. McElroy. A *Life* photo of McElroy at the desk has been widely circulated among fans, and appears on the back of the first issue of the Morse Telegraph Club's *Dots and Dashes* (Jan-Feb 1964). The keys in the photo are Standard (gray base) Original model Vibroplex bugs.

16. Boston broker: *Boston Globe*, April 1 1963 (Ashby column).

17. Ashby column: *Boston Globe*, April 1 1963. "Ted never referred to his XYL [wife] by any other words than Mrs. McElroy.", Sy Saslow, WB2MEW, to author, June 26 1992.

18. Health, weight: Memos to Saratoga and various buyers dated December 18, 20 1962; April 26 1963; May 13, 28 1963; August 6 1963; September 5 1963; October 22, 24 (2) 1963; November 8 1963. McElroy to John J. Lavin, Secretary Treasurer, Morse Telegraph Club, April 5 1963. Death certificate.

Chapter 10:

1. Ted McElroy died on November 12, 1963. Death certificate.

2. Wake, etc.: *The Boston Herald*, November 13 1963. Unidentified clipping. Calvary Cemetery (also called Old Calvary Cemetery) is located in the Mattapan section of Boston. Calling cards, letters of condolence. Art Stockellberg: "VWOA in the News" column, *Wire and Radio Communications*, January 1964. Stockellberg actually wrote that he dropped in "Friday night", but visiting hours were held only on Wednesday evening and Thursday afternoon and evening, with the funeral and burial Friday morning, according to *The Littleton Independent*, November 13 1963.

3. Morse Telegraph Hall of Fame: *Dots and Dashes*, January-February 1964 (Vol. 1, No. 1).

4. Jack's keys: Actually, a J-38 (Signal Corps nomenclature) without its phenolic base is a J-30. The prototype Mac-Key was a 1938B model, serial number 5517. Price list, McElroy Electronics Corporation, January 1 1968. *QST*, November 1968, p. 158. A hundred hand keys sold: John C. McElroy.

5. Sale of depot: South Middlesex Registry of Deeds, Book 11707 Page 286.

Chapter 11

1. Many of my photographs, especially those in Chapters 11 and 12, were printed and enlarged courtesy of Mike Scimeca, of Maynard, Mass.

2. Through 1942: His last key ad appeared in the 1943 *Handbook*. However, keys in dealer's inventory were sold for several years thereafter. For example, Ed Conover, W2TPJ, recalls buying a new no. 600 from a New York dealer (probably Barry Electronics) about 1950. A 1950 form letter McElroy sent to inquirers states that he has "not manufactured telegraph keys...in more than ten years" (he was close enough).

3. 1934 Mac-Key: Electro Bug post specifically designed for carrying: An Electro Mfg. Co. ad refers to the "'T' Grip—Easy to handle, prevents shocks or breakage." Ref *Railroad Telegrapher*, September 1927, p. 182. Neal McEwen (K5RW) gave "a convenient means...to carry" as one purpose of McElroy's T-bar in his article "The K5RW Bug Collection, Part II," *QCWA News*, Spring 1983. Dave Ingram (K4TWJ) illustrates the finger-carry using a 1938B model in a photograph on page 15 of his book *Keys, Keys, Keys* (CQ Communications Inc, 1991), but that this is possible is irrelevant in determining the purpose of the design. "big fat fingers": Part II; Irene (Kaszuba) Rhilinger, August 11 1993. "important" feature: *QST*, December 1934, p. 81. Purpose of single screw on paddles, ref *R/9* magazine, February 1935.

4. 1935 Mac-Key: almost immediately: The 1934 was first advertised in December of that year (*QST*, p. 81), and is shown in the "Navy rejection" article (see Chapter 5) in the December 18 1934 *Boston Traveler*. In January 1935, the 1935 model is shown in *Radio* at Part 1 and in an ad on page 32. Recalled keys: *R/9* magazine, February 1935.

5. 1936 Mac-Key: mid-1935: The $7.95 Mac-Key was first offered in a McElroy ad in *QST* for December 1935 (p. 100). However, a May 1935 Radio Shack ad in *QST* offers a $7.95 Mac-Key. The subject of both ads would seem to be the 1936A model, since the 1935 model listed for $10.50 (or, as McElroy put it, $17.50 with a "temporary" 40% discount). The first actual illustration in print of the 1936A is in a photo of W1ZK presenting McElroy with the Brockton trophy, which appeared in *QST* for November, 1935 (p. 24); the photo was likely taken at a VWOA meeting in Boston on October 21, 1935 (see the *Boston Globe*, October 22, 1935, but the key is not shown in the *Globe* article). The 1936A model Mac-Key also appears in the Hallicrafters ad on page 4 of the December, 1935, issue of *QST*; it is the early two-paddle variant. 1936B Mac-Key: "excellent" suspension: ad, 1936 Handbook. p. 432. 1936 Special: September 1936 McElroy flyer; I have not seen one, but from the late date I assume that this would appear as a B variant.

6. Junior Mac-Key: McElroy's ad used a drawing of the Junior; the first published photographs of the Junior appeared in *the Vail Correspondent*, no. 1 (October 1992). Bent-lug pivot: This is the style used on almost all Vibroplex bugs since the mid-1920s. Stamped legend: Chuck Brydges W4WXZ to author, May 21 1994.

7. Navy and 1937 Mac Key: Information on Navy nameplate courtesy of Lynn Burlingame, N7CFO. The nomenclature CMK-26009 is typical for Navy keys of the period and is interpreted as follows: C for Contractor followed by the manufacturer's code, often a mnemonic (MK for McElroy, a mnemonic for Mac Key), 26000 being the Navy telegraph key/keyer series, and 26009 identifying a speed key. "extra special speed key": 1937 *Handbook*, page 471.

8. 1938 Mac-Key: *QST*, May 1937, p. 117. Standard model: *QST*, November 1937. Specifications, see 1938 *Handbook*. The Vibroplex "bent lug" or "yoke tab" pivot, invented by Horace Martin, received patent no. 1,445,226 in 1923. The left-handed model mentioned (author's collection) is undoubtedly a factory creation: the right-hand location nameplate holes and ground wire terminal hole had not been drilled.

9. No. 500: 1940 *Handbook*, p. 524.

10. A-400, P-500, S-600: 1941 *Handbook*. S-600 "bluish tinge": Handbook, 1941. CP-500 and 500-742: 1942 *Handbook*; *Learning the Radiotelegraph Code*, (ARRL, July 1942 ed.); November 1942 *QST*, June 1942 McElroy Catalog.

11. McElroy Electronics Mac-Key: The refinished Standard 1938B Mac Key, serial number 5517, is in the McElroy family collection. It also appears in the McElroy Electronics ad in the 1969 *Handbook*. The price is from an early 1968 price list.

Chapter 12

1. Earliest form of key: The first telegraph key was actually a form of strap key, invented by Alfred Vail in 1844; see *the Vail Correspondent*, no. 2 (January 1993), p. 16.

2. Straight Key: It is mentioned in the July, 1937, issue of *QST* (p. 75) at $2.50. By October (*QST*, p. 111) it was $1.50. To be consistent, I would call the cast iron base the "frame" since it supports the lever, but its design is such that it functions as a base. The Hummer is described in McElroy's June 1938 flyer.

3. Hand Key: June 1938 McElroy flyer. Signal Corps J-30: Remove the phenolic base from a J-38, and you have a J-30 key (a legless key with circuit closer).

4. Stream Key, first model: appeared 1938: This is based on its first (and only) appearance in the 1939 *Handbook*.

5. Stream Key, second model: *Handbook*, 1940, 1941. 1942.

6. I offer, without comment, McElroy's claim in his June, 1942, catalog that he had 50,000 of the #200 straight keys and "thousands" of the CP-500 (a/k/a 500-742) bugs in stock for delivery.

7. Telegraph Apparatus Company: Handbook, 1945, 1946. In differentiating the TAC Stream Keys from those of McElroy manufacture it has been postulated that the smaller ones, or those with the cheaper hex hardware, were TAC, but McElroy made small ones (the early #100) and used hex hardware on his late models. That the bulge in the lever at the contact differentiates the TAC keys was first suggested to me by Richard Titus NV2C; an

examination of my own keys supports this view.

8. Cut-Off key: See TAC ad in the 1945 and 1946 *Handbooks*.

9. J-38: John C. McElroy. Black finish: Those made by Lionel also have a black base finish, but are marked Lionel. Those made by American Radio Hardware have an unfinished base. "school systems": See, for example, "Code Practice Equipments EE-94-F and EE-95-F" (TM11-2093), Department of the Army, November 1950.

10. Professional Model Hand Key: McElroy Electronics Corporation flyer, May 24 1965. *QST* ad, November 1968, p. 158. The description was from Ted's March 1938 flyer. The price is from an early 1968 price list.

Appendix A

Regarding the Mac Auto, see Chapter 4, p. 33, McElroy's 1937 *Handbook* ad, and *QST*, December 1935. It was originally said to include an oscillator; later, it was advertised as havin a relay output. It was, then, a Keyer, and when combined with a Tape Puller made up a Keying Unit.

Appendix C

The chart is from *Morse Code, the Essential Language*, by Carron (ARRL, 1991). ITR change to Continental: *QST*, February 1939, page 70. Interval between words: Compare, for example, the timing given in Loomis, *Radio Theory and Operating* (Loomis publishing, 1928 ed.) with that in Hutchens, "Conquer the Code with Rhythm," *Relay* (pub. R.C.A. Communications), March 1941, the relevant portion of which was reprinted in *QST*, September 1941, p. 36, or in *International Morse Code (Instructions), War Department TM11-459* (USGPO, 1945).

Appendix E

1. Vibroplex dating: The Vibroplex company was sold, and moved to Maine in 1979, at which time the serial numbers were started over. At the time this is written, John Elwood, WW7P, is engaged in compiling a massive list of over 2,000 Vibroplex serial numbers and correlating them with production dates.

2. One key collector: Neal McEwen, K5RW, "The K5RW Bug Collection, Part II," *QCWA News*, Vol. 32 No. 1.

3. Because the Navy bug serial numbers are not part of the commercial numbering system, and occur on special nameplates, they are not included in the list.

Appendix F

1. Sir Charles Wheatstone: *The New Encyclopaedia Britannica*, Chicago, 15th ed. (1987).

2. Morse code: Wheatstone originally used the Bain code (ref Abbot, Ed., *Smithsonian Scientific Series, Vol. 12: Great Inventions*, Smithsonian Institution Series, Inc., 1934. p. 80; for the Bain code itself see *Hawkins Electrical Guide*, No. 8 (Theo. Audel & Co., 1917, 1926), p. 2246). Unlike Morse code, the Bain code used no spaced characters. Later, Continental was the code used. There are other automatic telegraph systems, for example, the five-level-code Baudot system, but the Wheatstone system is notable for its encoding of the dots and dashes themselves. McElroy followed common parlance (as I may do in this appendix) in referring to the current Wheatstone code as Morse.

3. Sprocket holes: Actually, a keyboard perforator places a sprocket hole (a letter space) after each letter typed, so that typing a space (word-space) adds only two (more) sprocket holes to the slip. Thus, two typed spaces after a letter will result in a sequence of five sprocket holes.

4. Code timing is often stated in terms of transmitted dot length, but that can lead to confusion.

5. The space between words is sometimes stated as being a four unit length, in addition to the three unit length letter space. The seven-unit word space is a change from an earlier five-unit word space standard.

6. "Baud" is after Emile Baudot (1848 - 1903). "Bit" is the abbreviation for binary digit; it is the unit of information content, is unrelated to timing, and so is not the appropriate term in this discussion.

7. MORSE is a 25-dot word: Disregard Schnell's analysis (F.H. Schnell, "How's Your Fist?", *QST*, February 1934, p. 18) where he concludes that IS NOW has 24 dots. He is (perhaps unwittingly) merely measuring the tape in terms of *spaces between* dots (i.e. between center holes); he would nevertheless have arrived at the correct answer of 28 dots had he not forgotten the word-space following NOW. Schnell must have misunderstood his source (Frank

Borsody, W2AYN), who was an expert in Wheatstone matters.

8. The sample of tape shown reads "McElroy Morse" and was often used by Ted McElroy in his later ads and letterheads. It has, however, been corrected, because the illustration McElroy used showed a non-standard number of center holes (four) between the words.

Appendix G

1. The Cape Cod Radio Club letter to McElroy states that TESTS has 18 tape center holes (36 baud), and that a typical 21-hole (42 baud) word would be "IN space THE space." This would only be true if the word-space were seven baud, as it is today. Thus, consideration of the effects of a 5-baud word space (the earlier standard) is unnecessary.

2. Borsody "points out that one five-letter word is equivalent to 24 space holes on the perforator...." F.H. Schnell, "How's Your Fist?", *QST*, February 1934, p. 19. As to the remainder of the quoted sentence and Schnell's analysis, I believe that Schnell misunderstood Borsody; see Appendix F, note 7.

3. Six years after the Cape: Ray Hutchens, "Conquer the Code with Rhythm," *Relay* (pub. R.C.A. Communications), March 1941, the relevant portion of which was reprinted in *QST*, September 1941, p. 36; it states that the standard radio code word contains 24 keying cycles, or 48 time units.

4. *THE ARC*, 24-dot: This is based on a retyped reprint of the original 1939 article which appeared in 1985 (see Chapter 5, note 21). McElroy, in his August 1939 flyer, states that the Asheville standard was "24 dots to the word."

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